STATE OF UTAH  DEPARTMENT OF NATURAL RESOURCES  DIVISION OF OIL, GAS AND MINING									AMENI	FOI DED REPO	RM 3			
APPLICATION FOR PERMIT TO DRILL									1. WELL NAME and	NUMBER NBU 921-				
2. TYPE OF WORK  DRILL NEW WELL REENTER P&A WELL DEEPEN WELL									3. FIELD OR WILDCAT  NATURAL BUTTES					
4. TYPE	OF WELL	Ga	ıs Well Co	oalbed Metha	ne Well: NO					5. UNIT or COMMU	NITIZAT: NATURAL		EMENT	NAME
6. NAME	OF OPERATO	R	KERR-MCGEE OIL							7. OPERATOR PHON				
8. ADDR	ESS OF OPER									9. OPERATOR E-MA	IL			
10. MIN	ERAL LEASE N	IUMBER	P.O. Box 17377		IERAL OWNI	ERSHIP				12. SURFACE OWN		@anadark	0.00111	
(FEDERA	AL, INDIAN, O	OR STATE) UTU 0576		FEDERA	AL 📵 INC	DIAN 🗍	STATE	FEE (		FEDERAL INC	DIAN 📵	STATE	( F	EE (
13. NAM	E OF SURFAC	E OWNER (if box	( 12 = 'fee')							14. SURFACE OWNE	ER PHON	E (if box	12 = 'fe	e')
15. ADD	RESS OF SUR	FACE OWNER (if	box 12 = 'fee')							16. SURFACE OWNE	ER E-MA	L (if box	12 = 'fe	e')
		E OR TRIBE NAM	E		END TO COM		PRODUC	TION FROM		19. SLANT				
(if box 1	2 = 'INDIAN'	) Ute Tribe		YES (			ing Applica	tion) NO 🧻	)	VERTICAL DIR	RECTIONA	L 📵 F	HORIZON	TAL 🗍
20. LOC	ATION OF WI	ELL		FOOTAGES		QTF	R-QTR	SECTIO	ON	TOWNSHIP	RA	NGE	MEF	RIDIAN
LOCATI	ON AT SURFA	CE	102	25 FNL 815	FEL	NI	ENE	21		9.0 S	21	.0 E		S
Top of l	Jppermost Pr	oducing Zone	119	93 FNL 670	FEL	NI	ENE	21		9.0 S	21	.0 E	S	
At Tota	l Depth		119	93 FNL 670	FEL	NI	ENE	21		9.0 S 2:		21.0 E S		S
21. COU	NTY	UINTAH		22. DIS	TANCE TO N	NEAREST 67		NE (Feet)		23. NUMBER OF AC	RES IN D		UNIT	
					TANCE TO N d For Drillin		pleted)	SAME POOL		<b>26. PROPOSED DEPTH</b> MD: 10180 TVD: 10170				
27. ELEV	ATION - GRO	UND LEVEL 4829		28. BO	28. BOND NUMBER  WYB000291				29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Permit #43-8496					
				Ho	le, Casing,	and Ce	ment In	formation						
String	Hole Size	Casing Size	Length	Weight	Grade 8	& Threa	d Max	Mud Wt.		Cement		Sacks	Yield	Weight
Surf	12.25	9.625	0 - 2620	36.0	J-55	5 LT&C		0.2		Class G		215	1.18	15.6
Prod	7.875	4.5	0 - 9660	11.6	TOC	) LT&C	_	11.6	Dro	Class G emium Lite High Str	ronath	380 420	3.38	15.6
Piou	7.673	4.3	9660 - 1018			.10 LT&C		11.6	FIE	50/50 Poz	engui	1400	1.31	14.3
			I .		A	ттасні	MENTS			·		I		
	VERIFY '	THE FOLLOWI	NG ARE ATTA	CHED IN A	ACCORDAN	ICE WIT	TH THE U	TAH OIL A	ND (	GAS CONSERVATI	ON GEN	IERAL R	ULES	
<u></u> w	/ELL PLAT OR	MAP PREPARED	BY LICENSED	SURVEYOR C	OR ENGINEE	R	<b></b> coı	MPLETE DRI	LLING	PLAN				
Д	FIDAVIT OF	STATUS OF SURI	FACE OWNER AG	GREEMENT (	IF FEE SURF	FACE)	FOR	M 5. IF OPE	RATO	R IS OTHER THAN TH	HE LEASI	OWNER		
DI DRILLEC		SURVEY PLAN (I	F DIRECTIONAL	LY OR HOR	ZONTALLY		<b>г</b> тор	OGRAPHICA	L MAI	P				
NAME [	Danielle Piernot	<del></del>	TITLE	Regulatory Ar	nalyst			PHONE 72	0 929-	6156				
SIGNAT	URE		DATE (	7/30/2009				EMAIL dan	ielle.p	iernot@anadarko.com				
APT NUMBER ASSIGNED 43047506110000  APPROVAL														

API Well No: 43047506110000



## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER

Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

## Permit To Drill

\*\*\*\*\*

Well Name: NBU 921-21A3DS **API Well Number:** 43047506110000

Lease Number: UTU 0576 Surface Owner: INDIAN Approval Date: 8/11/2009

#### **Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

## **Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

## **Exception Location:**

Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby granted.

## **Commingle:**

In accordance with Cause No. 173-14 commingling the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

## **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

API Well No: 43047506110000

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

## **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

 Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available) OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at http://oilgas.ogm.utah.gov

## **Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
- Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

**Approved By:** 

Gil Hunt

Associate Director, Oil & Gas

Die Hunt

SUNDF  Do not use this form for propose bottom-hole depth, reenter plu DRILL form for such proposals.  1. TYPE OF WELL Gas Well  2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSI	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0576  6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr  7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES  8. WELL NAME and NUMBER: NBU 921-21A3DS  9. API NUMBER: 43047506110000		
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	<b>PHON</b> treet, Suite 600, Denver, CO, 80217 3779	<b>E NUMBER:</b> 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
11.	<b>P, RANGE, MERIDIAN:</b> Township: 09.0S Range: 21.0E Meridian: S CK APPROPRIATE BOXES TO INDICATI	E NATURE OF NOTICE DEPORT	COUNTY: UINTAH  STATE: UTAH
TYPE OF SUBMISSION	CK APPROPRIATE BOXES TO INDICATE	TYPE OF ACTION	OR OTHER DATA
Kerr-McGee Oil & G extension to this A	□ ACIDIZE □ CHANGE TO PREVIOUS PLANS □ CHANGE WELL STATUS □ DEEPEN □ OPERATOR CHANGE □ PRODUCTION START OR RESUME □ REPERFORATE CURRENT FORMATION □ TUBING REPAIR □ WATER SHUTOFF □ WILDCAT WELL DETERMINATION  MPLETED OPERATIONS. Clearly show all pertass Onshore, L.P. (Kerr-McGee), PD for the maximum time allowith any questions and/or com	respectfully requests an wed. Please contact the nments. Thank you.	CASING REPAIR CHANGE WELL NAME CONVERT WELL TYPE NEW CONSTRUCTION PLUG BACK RECOMPLETE DIFFERENT FORMATION TEMPORARY ABANDON WATER DISPOSAL ✓ APD EXTENSION OTHER: TOlumes, etc.  Approved by the Utah Division of Oil, Gas and Mining  ate: August 23, 2010  y:
NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER	TITLE  Pogulatory Analyst	
SIGNATURE N/A	720 929-6156	Regulatory Analyst  DATE 8/12/2010	



## The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

## Request for Permit Extension Validation Well Number 43047506110000

**API:** 43047506110000 Well Name: NBU 921-21A3DS

Location: 1025 FNL 0815 FEL QTR NENE SEC 21 TWNP 090S RNG 210E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 8/11/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that requ

	tion as submitted in t sion. Following is a c						
	ated on private land, ed? 🔵 Yes 📵 No		ership changed, if	so, has the	e surface a	igreement been	
	any wells been drille requirements for thi			d well which	ch would a	ffect the spacing o	-
	nere been any unit or s proposed well?			e that could	d affect the	e permitting or opei	ration
	there been any chang the proposed location			ng ownersl	nip, or righ	itof- way, which co	blu
• Has th	ne approved source o	f water for d	rilling changed?	🧻 Yes 🍺	) No		
	there been any physi je in plans from what						3
• Is bor	nding still in place, w	hich covers t	his proposed wel	? 📵 Yes	No ℓ	pproved by the Itah Division of , Gas and Mining	j
nature:	Danielle Piernot		8/12/2010				
Title:	Regulatory Analyst Re	presenting:	KERR-MCGEE OIL 8	& GAS ONSH	or <mark>Pate:_</mark>	August 23, 2010	
	•	_			P	Millio On	

Sig

By: Dolly

Form 3160-3 (August 2007)

## RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OLANG 80 74, 2009

FORM APPROVED OMB No. 1004-0136 Expires July 31, 2010

Expires July 31, 2
Lease Serial No.

		0100576
APPLICATION FOR PERM	IT TO DRILL OR REENTER BLM	6. If Indian, Allottee or Tribe Name
la. Type of Work: DRILL REENTER		7. If Unit or CA Agreement, Name and No. 891008900A
		8. Lease Name and Well No.
	Other ☐ Single Zone ☑ Multiple Zone	NBU 921-21A3DS
KERRMCGEE OIL&GAS ONSHORE-NA: Dani	act: DANIELLE E PIERNOT elle.Piernot@anadarko.com	9. API Well No. 43-047-50611
3a. Address PO BOX 173779 DENVER, CO 80202-3779	3b. Phone No. (include area code) Ph: 720-929-6156 Fx: 720-929-7156	10. Field and Pool, or Exploratory NATURAL BUTTES
4. Location of Well (Report location clearly and in account	ordance with any State requirements.*)	11. Sec., T., R., M., or Blk. and Survey or A
	40.02604 N Lat, 109.55021 W Lon	Sec 21 T9S R21E Mer SLB
At proposed prod. zone NENE 1193FNL 670FEL		
<ol> <li>Distance in miles and direction from nearest town or p APPROXIMATELY 28 MILES SOUTHEAST (</li> </ol>	OF OURAY, UTAH	12. County or Parish 13. Star UINTAH UT
<ol> <li>Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)</li> <li>670 FEET</li> </ol>	16. No. of Acres in Lease 1480.00	17. Spacing Unit dedicated to this well
<ol> <li>Distance from proposed location to nearest well, drillin completed, applied for, on this lease, ft.</li> </ol>	ng, 19. Proposed Depth	20. BLM/BIA Bond No. on file
APPROXIMATELY 350 FEET	10180 MD 10170 TVD	WYB000291
21. Elevations (Show whether DF, KB, RT, GL, etc. 4829 GL	22. Approximate date work will start 08/17/2009	23. Estimated duration 60-90 DAYS
	24. Attachments	
ne following, completed in accordance with the requiremen	ts of Onshore Oil and Gas Order No. 1, shall be attached to	o this form:
Well plat certified by a registered surveyor.  A Drilling Plan.  A Surface Use Plan (if the location is on National Forest S SUPO shall be filed with the appropriate Forest Service	4. Bond to cover the operation Item 20 above).  ystem Lands, the 5. Operator certification	ons unless covered by an existing bond on file (so
25. Signature (Electronic Submission)	Name (Printed/Typed) DANIELLE E PIERNOT Ph: 720-929-61	56 Date 07/30/2009
Title REGULATORY ANALYST	<del></del>	
Approved by (Signature)	Name (Printed/Typed)	Date
Title Assistant Field Manager	Jerry Kenczka	MAY 2 4 20
Lands & Mineral Resources	VERNAL FIELD OFFICE	
oplication approval does not warrant or certify the applicant erations thereon.	holds legal or equitable title to those rights in the subject	ease which would entitle the applicant to conduc

Additional Operator Remarks (see next page)

JUN 0 8 2011

Electronic Submission #72659 verified by the BLM Well Information System For KERRMCGEE OIL&GAS ONSHORE LP, sent to the Vernal Committed to AFMSS for processing by GAIL JENKINS on 08/04/2009 ()

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NOS APD POSTED 08-10-09

A ENGO WAS

AFMSS# 196X 35645AE

NOTICE OF APPROMALTOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

096XJ5645AE

NO NOS

**CONDITIONS OF APPROVAL ATTACHED** 



## UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE

VERNAL, UT 84078

(435) 781-4400



## CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:

Kerr McGee Oil & Gas Onshore LP

Location:

NENE, Sec 21, T9S R21E

Well No: API No: NBU 921-21A3DS 43-047-50611 Lease No: Agreement:

**Natural Buttes Unit** 

UTU-0576

**OFFICE NUMBER:** 

(435) 781-4400

OFFICE FAX NUMBER:

(435) 781-3420

# A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

## **NOTIFICATION REQUIREMENTS**

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: ut vn_opreport@blm.gov.
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 7 Well: NBU 921-21A3DS 5/19/2011

## SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

## SITE SPECIFIC CONDITIONS OF APPROVAL

- Paint old and new facilities "Shadow Gray."
- Move the existing pipeline off the damage area of the well pad.
- Construct diversion ditches around the well pad.
- In accordance with the guidelines specified in the Utah BLM Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002 (See Appendix D), a raptor survey would take place during raptor nesting season (January 1 through September 30) and conduct is operations according to specifications in the guidelines.
- If project construction operation are not initiated before June 17, 2010. KMG should conduct
  additional biological surveys in accordance with the guidelines specified in the USFWS Rare
  Plant Conservation Measurements for Uinta Basin Hookless cactus (See Appendix D) and
  conduct its operations according to its specifications.

## **BIA Standard Conditions of Approval:**

- Soil erosion will be mitigated by reseeding all disturbed areas.
- The gathering pipelines will be constructed to lie on the surface. The surface pipelines will not be bladed or cleared of vegetation. Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the right-of-way. Where pipelines do not parallel roads but cross-country between sites, they shall be welded in place at well sites or on access roads and then pulled between stations with a suitable piece of equipment. Traffic will be restricted along these areas so that the pipeline right-of-way will not be used as an access road.
- An open drilling system shall be used, unless otherwise specified in 10.0 Additional Stipulations
  of this document and in the Application for Permit to Drill. A closed drilling system shall be used
  in all flood plain areas, and other highly sensitive areas, recommended by the Ute Tribe
  Technician, BIA, and other agencies involved.
- The reserve pit shall be lined with a synthetic leak proof liner. After the drilling operation is complete, excess fluids shall be removed from the reserve pit and either hauled to an approved disposal site or shall be used to drill other wells. When the fluids are removed the pit shall be backfilled a minimum of 3.0' below the soil surface elevation.
- A closed production system shall be used. This means all produced water and oil field fluid wastes shall be contained in leak proof tanks. These fluids shall be disposed of in either approved injection wells or disposal pits.
- Major low water crossings will be armored with pit run material to protect them from erosion.
- All personnel should refrain from collecting any paleontological fossils and from disturbing any fossil resources in the area.

Page 3 of 7 Well: NBU 921-21A3DS 5/19/2011

- If fossils are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.
- Before the site is abandoned the company will be required to restore the right-of-way to near its
  original state. The disturbed area will be reseeded with desirable perennial vegetation. If
  necessary, the Bureau of Indian Affairs or Bureau of Land Management will provide a suitable
  seed mixture.
- Noxious weeds will be controlled on all surface disturbances within the project area. If noxious
  weeds spread from the project area onto adjoining land, the company will also be responsible
  for their control.
- If project construction operations are scheduled to occur after December 31, 2009, KMG should conduct annual raptor surveys in accordance with the guidelines specified in the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002. If active raptor nest are indentified during a new survey, KMG should conduct its operations according to the seasonal restrictions detailed in the Uinta basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Gui9ldlines (See Appendix D).
- USFWS threatened and endangered plant and animal conservation measures will be followed, as appropriate to the species identified by the biological resource survey (See Appendix D).
- All personnel should refrain from collecting artifacts and from disturbing any significant cultural resources in the area.
- If artifacts or any culturally sensitive materials are exposed or identified during construction, all
  construction must cease and immediate notification to the Energy and Minerals Department and
  the Cultural Rights Protection Officer.

Page 4 of 7 Well: NBU 921-21A3DS 5/19/2011

## DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

## SITE SPECIFIC DOWNHOLE CONDITIONS OF APPROVAL

• A Gama Ray Log shall be run from TD to surface.

#### Variances Granted:

## Air Drilling:

- Properly lubricated and maintained rotating head, variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
- Blooie line discharge 100' from the well bore, variance granted for blooie line discharge to be 45' from the well bore.
- Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for two truck/trailer mounted air compressors located within 40 feet from the well bore and 60' from the blooie line.
- In lieu of mud products on location, Kerr McGee will fill the reserve pit with water for kill fluid.
- Automatic igniter. Variance granted for igniter due to there being no productive formations while drilling with air.
- FIT test. Variance granted due to well known geology and problems that can occur with FIT test.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

## DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be

Page 5 of 7 Well: NBU 921-21A3DS 5/19/2011

performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be reported in the driller's log.

- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water
  is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM
  Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
   Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum
   Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the <u>top of cement</u> and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 6 of 7 Well: NBU 921-21A3DS 5/19/2011

#### **OPERATING REQUIREMENT REMINDERS:**

 All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written
  communication and must be received in this office by not later than the fifth business day
  following the date on which the well is placed on production. The notification shall provide, as a
  minimum, the following informational items:
  - o Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - o The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or

Page 7 of 7 Well: NBU 921-21A3DS 5/19/2011

data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field
  Office Petroleum Engineers will be provided with a date and time for the initial meter calibration
  and all future meter proving schedules. A copy of the meter calibration reports shall be
  submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API
  standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All
  measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted
  to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs
  first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be
  adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively
  sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior
  approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30
  days, prior approval of the BLM Vernal Field Office shall be obtained and notification given
  before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0576
SUNDF	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr
Do not use this form for proposition bottom-hole depth, reenter plu DRILL form for such proposals.	sals to drill new wells, significantly deepen igged wells, or to drill horizontal laterals. Us	existing wells below current se APPLICATION FOR PERMIT TO	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-21A3DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047506110000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHON treet, Suite 600, Denver, CO, 80217 3779	NE NUMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1025 FNL 0815 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NENE Section: 21	rp, range, meriolan: Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPORT,	, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
Kerr-McGee Oil & G extension to this A	□ ACIDIZE □ CHANGE TO PREVIOUS PLANS □ CHANGE WELL STATUS □ DEEPEN □ OPERATOR CHANGE □ PRODUCTION START OR RESUME □ REPERFORATE CURRENT FORMATION □ TUBING REPAIR □ WATER SHUTOFF □ WILDCAT WELL DETERMINATION  MPLETED OPERATIONS. Clearly show all pertass Onshore, L.P. (Kerr-McGee) APD for the maximum time allowith any questions and/or con	respectfully requests an owed. Please contact the nments. Thank you.	Approved by the Utah Division of Oil, Gas and Mining
		E	By: Dally Syll
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	TITLE Regulatory Analyst	
SIGNATURE N/A		<b>DATE</b> 7/11/2011	



## The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

## Request for Permit Extension Validation Well Number 43047506110000

**API:** 43047506110000 **Well Name:** NBU 921-21A3DS

Location: 1025 FNL 0815 FEL QTR NENE SEC 21 TWNP 090S RNG 210E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued: 8/11/2009** 

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

	ated on private land, has ted?  Yes  No	the ownership changed, if so, has the surface agreement been
	any wells been drilled in t requirements for this loc	the vicinity of the proposed well which would affect the spacing or cation? ( Yes ( No
	here been any unit or othe s proposed well?  Yes	er agreements put in place that could affect the permitting or operation $lacksquare$ No
	there been any changes to the proposed location?(	o the access route including ownership, or rightof- way, which could Yes 📵 No
• Has th	he approved source of wa	ter for drilling changed? 🥛 Yes 📵 No
		changes to the surface location or access route which will require a discussed at the onsite evaluation? () Yes (i) No
• Is bor	nding still in place, which	covers this proposed well?   Yes   No
Signature:	Andy Lytle	<b>Date:</b> 7/11/2011

Title: Regulatory Analyst Representing: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Sundry Number: 1-9621 Approval of this: 43047506110000

Action is Necessary

	STATE OF UTAH		FORM 9			
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	3	<b>5.LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0576			
SUNDF	RY NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE			
Do not use this form for proposition-hole depth, reenter plu DRILL form for such proposals.	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES					
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-21A3DS			
2. NAME OF OPERATOR:			9. API NUMBER:			
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4. LOCATION OF WELL FOOTAGES AT SURFACE: 1025 FNL 0815 FEL			COUNTY: UINTAH			
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NENE Section: 21	IP, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH			
11. CHE	CK APPROPRIATE BOXES TO INDICATE NA	ATURE OF NOTICE, REPORT,	OR OTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION				
,	☐ ACIDIZE ☐ A	ALTER CASING	☐ CASING REPAIR			
Approximate date work will start:	✓ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	☐ CHANGE WELL NAME			
10/19/2011	☐ CHANGE WELL STATUS ☐ C	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE			
SUBSEQUENT REPORT Date of Work Completion:	_	FRACTURE TREAT	☐ NEW CONSTRUCTION			
·		PLUG AND ABANDON	PLUG BACK			
SPUD REPORT		RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION			
Date of Spud:		SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON			
DRILLING REPORT		VENT OR FLARE	☐ WATER DISPOSAL ☐ APD EXTENSION			
DRILLING REPORT Report Date:		OTHER				
		-	OTHER:			
The Operator reques well. Changes in Blackhawk formation	OMPLETED OPERATIONS. Clearly show all pertinents approval for changes in the driculude a FIT waiver, casing change (resides in Mesaverde formation) ease see the attachment for detail	illing operations for this is, deepening to the and closed loop drilling ils. Thank you.	Accepted by the Utah Division of Oil, Gas and Mining			
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	TITLE Regulatory Analyst				
SIGNATURE N/A		<b>DATE</b> 10/19/2011				

NBU 921-21A PAD

Drilling Program

1 of 7

## Kerr-McGee Oil & Gas Onshore. L.P.

#### NBU 921-21A3DS

Surface: 1025 FNL / 815 FEL NENE BHL: 1193 FNL / 670 FEL NENE

Section 21 T9S R21E

Unitah County, Utah Mineral Lease: UTU-0576

#### **ONSHORE ORDER NO. 1**

#### **DRILLING PROGRAM**

## Estimated Tops of Important Geologic Markers: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1588	
Birds Nest	1943	Water
Mahogany	2283	Water
Wasatch	4969	Gas
Mesaverde	7944	Gas
MVU2	8899	Gas
MVL1	9406	Gas
Sego	10181	Gas
Castlegate	10256	Gas
MN5	10620	Gas
TVD	11220	
TD	11320	

#### 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program

## 4. <u>Proposed Casing & Cementing Program:</u>

Please refer to the attached Drilling Program

## 5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program

NBU 921-21A PAD Drilling Program 2 of 7

#### 6. <u>Evaluation Program:</u>

Please refer to the attached Drilling Program

#### 7. <u>Abnormal Conditions</u>:

Maximum anticipated bottom hole pressure calculated at 11220' TVD, approximately equals 7,405 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,988 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

## 8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

#### 9. <u>Variances:</u>

Please refer to the attached Drilling Program. Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- · Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

#### **Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

NBU 921-21A PAD Drilling Program
3 of 7

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

#### Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### **Variance for Mud Material Requirements**

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

#### Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KM0 well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

NBU 921-21A PAD

Drilling Program

4 of 7

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

#### Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

#### Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

## 10. <u>Other Information:</u>

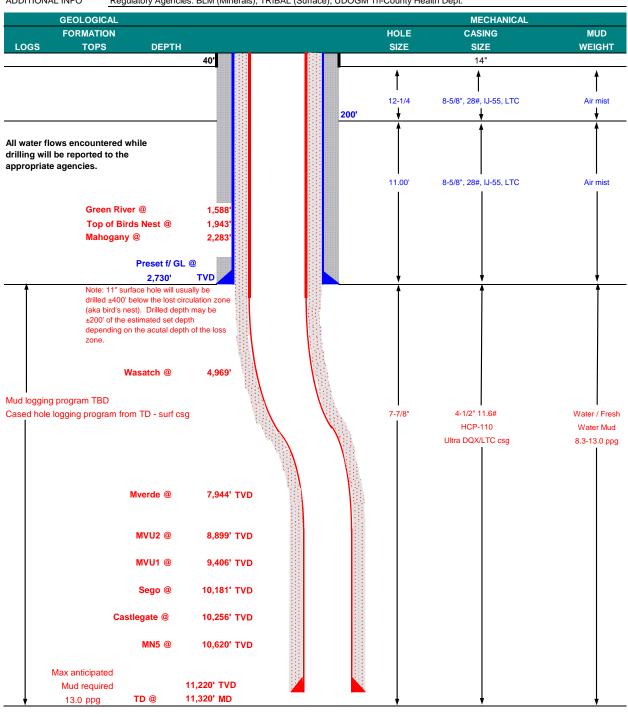
Please refer to the attached Drilling Program.

NBU 921-35H Pad Drilling Program 5 of 7



# KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME KER	R-McGEE O	IL & GAS ONSH	IORE LP		DATE	October 1	9, 2011		
WELL NAME NB	U 921-21A	\3DS			TD	11,220'	TVD	11,320' MD	
FIELD Natural Butte	S	COUNTY	Uintah S	TATE Uta	h	FINIS	SHED ELEVATION	4829.2	
SURFACE LOCATION	NENE	1025 FNL	815 FEL	Sec 21	T 9S	R 21E			
	Latitude:	40.026039	Longitude:	-109.55	0214		NAD 83		
BTM HOLE LOCATION	NENE	1193 FNL	670 FEL	Sec 21	T 9S	R 21E			
	Latitude:	40.025579	Longitude:	-109.54	9695		NAD 83		
OBJECTIVE ZONE(S)	BLACKHA	WK							
ADDITIONAL INFO	Regulatory	Agencies: BLM	(Minerals), TRIB	AL (Surfac	e), UDO	GM Tri-County	Health Dept.		



**Drilling Program** 



## KERR-McGEE OIL & GAS ONSHORE LP **DRILLING PROGRAM**

6 of 7

CASING PROGRAM	<u>/</u>	DESIGN FACTORS									
										LTC	DQX
	SIZE	INT	ERVA	L	WT.	GR.	CPLG.	BURST	COLLAPSE	TE	NSION
CONDUCTOR	14"	(	)-40'								
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,730	28.00	IJ-55	LTC	1.97	1.47	5.20	N/A
								10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0	to	5,000	11.60	HCP-110	DQX	1.19	1.14		3.49
	4-1/2"	5,000	to	11,320'	11.60	HCP-110	LTC	1.19	1.14	4.75	

**Surface Casing:** 

NBU 921-35H Pad

(Burst Assumptions: TD = 13.0 0.73 psi/ft = frac gradient @ surface shoe ppg)

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

Production casing:

0.66 psi/ft = bottomhole gradient (Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi)

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGH	IT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1		+ 0.25 pps flocele					
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
		+ 2% CaCl + 0.25 pps flocele					
SURFACE		NOTE: If well will circulate water	to surface, o <sub>l</sub>	otion 2 will b	e utilized		
Option 2 LEAD	2,230'	65/35 Poz + 6% Gel + 10 pps gilsonite	210	35%	11.00		3.82
		+ 0.25 pps Flocele + 3% salt BWOW					
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
		+ 0.25 pps flocele					
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION LEAD	4,460'	Premium Lite II +0.25 pps	330	20%	11.00		3.38
		celloflake + 5 pps gilsonite + 10% gel					
		+ 0.5% extender					
TAIL	6,860'	50/50 Poz/G + 10% salt + 2% gel	1,620	35%	14.30		1.31
		+ 0.1% R-3					

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

#### **FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

#### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:		DATE:	
	Nick Spence / Danny Showers / Chad Loesel		
DRILLING SUPERINTENDENT:		DATE:	

Kenny Gathings / Lovel Young

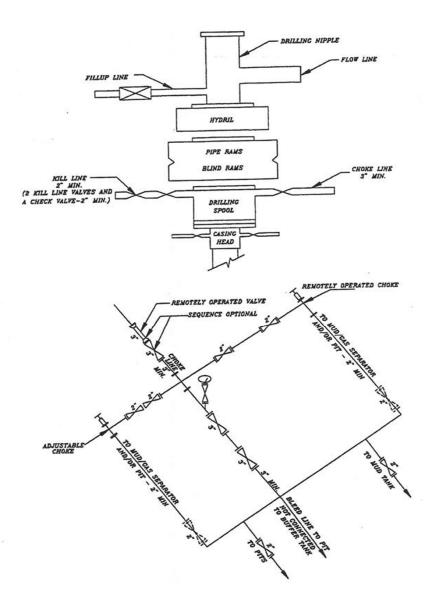
<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

NBU 921-21A PAD

EXHIBIT A

Drilling Program
7 of 7

## EXHIBIT A NBU 921-21A3DS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

## Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

Sundry Number: 1-9621 Approval of this: 43047506110000

Action is Necessary

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	3	<b>5.LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0576
SUNDF	RY NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
Do not use this form for proposition-hole depth, reenter plu DRILL form for such proposals.	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-21A3DS
2. NAME OF OPERATOR:			9. API NUMBER:
KERR-MCGEE OIL & GAS ONS	HORE, L.P.		43047506110000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHONE NU Street, Suite 600, Denver, CO, 80217 3779	UMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1025 FNL 0815 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NENE Section: 21	IP, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICATE NA	ATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
,	☐ ACIDIZE ☐ A	ALTER CASING	☐ CASING REPAIR
Approximate date work will start:	✓ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	☐ CHANGE WELL NAME
10/19/2011	☐ CHANGE WELL STATUS ☐ C	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	_	FRACTURE TREAT	☐ NEW CONSTRUCTION
·		PLUG AND ABANDON	PLUG BACK
SPUD REPORT		RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
Date of Spud:		SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
DRILLING REPORT		VENT OR FLARE	☐ WATER DISPOSAL ☐ APD EXTENSION
DRILLING REPORT Report Date:		OTHER	
		-	OTHER:
The Operator reques well. Changes in Blackhawk formation	OMPLETED OPERATIONS. Clearly show all pertinents approval for changes in the driculude a FIT waiver, casing change (resides in Mesaverde formation) ease see the attachment for detail	illing operations for this is, deepening to the and closed loop drilling ils. Thank you.	Accepted by the Utah Division of Oil, Gas and Mining
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	TITLE Regulatory Analyst	
SIGNATURE N/A		<b>DATE</b> 10/19/2011	

NBU 921-21A PAD

Drilling Program

1 of 7

## Kerr-McGee Oil & Gas Onshore. L.P.

#### NBU 921-21A3DS

Surface: 1025 FNL / 815 FEL NENE BHL: 1193 FNL / 670 FEL NENE

Section 21 T9S R21E

Unitah County, Utah Mineral Lease: UTU-0576

#### **ONSHORE ORDER NO. 1**

#### **DRILLING PROGRAM**

## Estimated Tops of Important Geologic Markers: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1588	
Birds Nest	1943	Water
Mahogany	2283	Water
Wasatch	4969	Gas
Mesaverde	7944	Gas
MVU2	8899	Gas
MVL1	9406	Gas
Sego	10181	Gas
Castlegate	10256	Gas
MN5	10620	Gas
TVD	11220	
TD	11320	

#### 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program

## 4. <u>Proposed Casing & Cementing Program:</u>

Please refer to the attached Drilling Program

## 5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program

NBU 921-21A PAD Drilling Program 2 of 7

#### 6. <u>Evaluation Program:</u>

Please refer to the attached Drilling Program

#### 7. <u>Abnormal Conditions</u>:

Maximum anticipated bottom hole pressure calculated at 11220' TVD, approximately equals 7,405 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,988 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

## 8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

#### 9. <u>Variances:</u>

Please refer to the attached Drilling Program. Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- · Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

#### **Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

NBU 921-21A PAD Drilling Program
3 of 7

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

#### Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### **Variance for Mud Material Requirements**

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

#### Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KM0 well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

NBU 921-21A PAD

Drilling Program

4 of 7

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

#### Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

#### Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

## 10. <u>Other Information:</u>

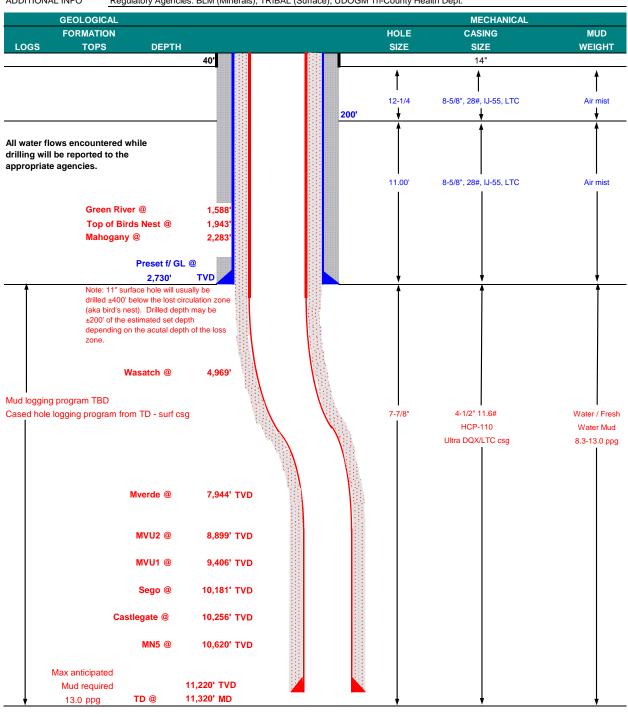
Please refer to the attached Drilling Program.

NBU 921-35H Pad Drilling Program 5 of 7



# KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME KER	R-McGEE O	IL & GAS ONSH	IORE LP		DATE	October 1	9, 2011		
WELL NAME NB	U 921-21A	\3DS			TD	11,220'	TVD	11,320' MD	
FIELD Natural Butte	S	COUNTY	Uintah S	TATE Uta	h	FINIS	SHED ELEVATION	4829.2	
SURFACE LOCATION	NENE	1025 FNL	815 FEL	Sec 21	T 9S	R 21E			
	Latitude:	40.026039	Longitude:	-109.55	0214		NAD 83		
BTM HOLE LOCATION	NENE	1193 FNL	670 FEL	Sec 21	T 9S	R 21E			
	Latitude:	40.025579	Longitude:	-109.54	9695		NAD 83		
OBJECTIVE ZONE(S)	BLACKHA	WK							
ADDITIONAL INFO	Regulatory	Agencies: BLM	(Minerals), TRIB	AL (Surfac	e), UDO	GM Tri-County	Health Dept.		



**Drilling Program** 



## KERR-McGEE OIL & GAS ONSHORE LP **DRILLING PROGRAM**

6 of 7

CASING PROGRAM	<u>/</u>								DESIGN F	ACTORS	
										LTC	DQX
	SIZE	INT	ERVA	L	WT.	GR.	CPLG.	BURST	COLLAPSE	TE	NSION
CONDUCTOR	14"	(	)-40'								
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,730	28.00	IJ-55	LTC	1.97	1.47	5.20	N/A
								10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0	to	5,000	11.60	HCP-110	DQX	1.19	1.14		3.49
	4-1/2"	5,000	to	11,320'	11.60	HCP-110	LTC	1.19	1.14	4.75	

**Surface Casing:** 

NBU 921-35H Pad

(Burst Assumptions: TD = 13.0 0.73 psi/ft = frac gradient @ surface shoe ppg)

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

Production casing:

0.66 psi/ft = bottomhole gradient (Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi)

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGH	IT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1		+ 0.25 pps flocele					
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
		+ 2% CaCl + 0.25 pps flocele					
SURFACE		NOTE: If well will circulate water	to surface, o <sub>l</sub>	otion 2 will b	e utilized		
Option 2 LEAD	2,230'	65/35 Poz + 6% Gel + 10 pps gilsonite	210	35%	11.00		3.82
		+ 0.25 pps Flocele + 3% salt BWOW					
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
		+ 0.25 pps flocele					
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION LEAD	4,460'	Premium Lite II +0.25 pps	330	20%	11.00		3.38
		celloflake + 5 pps gilsonite + 10% gel					
		+ 0.5% extender					
TAIL	6,860'	50/50 Poz/G + 10% salt + 2% gel	1,620	35%	14.30		1.31
		+ 0.1% R-3					

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

#### **FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

#### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:		DATE:	
	Nick Spence / Danny Showers / Chad Loesel		
DRILLING SUPERINTENDENT:		DATE:	

Kenny Gathings / Lovel Young

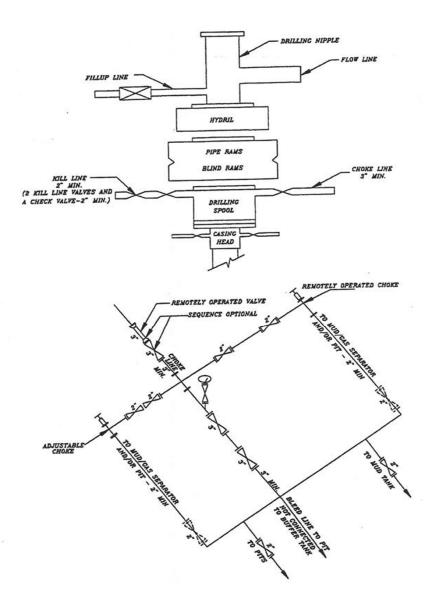
<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

NBU 921-21A PAD

EXHIBIT A

Drilling Program
7 of 7

## EXHIBIT A NBU 921-21A3DS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

## Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

Sundry Number: 20538 API Well Number: 43047506110000

			ronu o
	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0576
	RY NOTICES AND REPORTS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
	sals to drill new wells, significantly deepen or gged wells, or to drill horizontal laterals. Us		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-21A3DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		<b>9. API NUMBER:</b> 43047506110000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHON treet, Suite 600, Denver, CO, 80217 3779	<b>IE NUMBER:</b> 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1025 FNL 0815 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NENE Section: 21	P, RANGE, MERIDIAN: Township: 09.0S Range: 21.0E Meridian: S		STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	☐ ACIDIZE	☐ ALTER CASING	CASING REPAIR
NOTICE OF INTENT	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
Approximate date work will start:	CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
✓ SPUD REPORT	☐ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
Date of Spud: 11/18/2011	☐ REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
11/16/2011	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	APD EXTENSION
Report Date:	□ WILDCAT WELL DETERMINATION	OTHER	OTHER:
MIRU PETE MARTIN	PHONE NUMBER	ONDUCTOR HOLE TO 40'. READY MIX. SPUD WELL O S.  Oil	
Sheila Wopsock	435 781-7024	Regulatory Analyst	
<b>SIGNATURE</b> N/A		<b>DATE</b> 11/21/2011	

SUBMIT AS EMAIL Print Form

## BLM - Vernal Field Office - Notification Form

	ator KERR-McGEE OIL & GA		-	
	nitted By SHEILA WOPSOCK		nber <u>435</u>	.781.7024
	Name/Number NBU 921-21/			<del></del>
	Qtr <u>NE/NE</u> Section 21	Township g	<u>s</u> F	Range <u>21E</u>
	e Serial Number <u>UTU-0576</u>			
API N	Number <u>4304750611</u>			
	Notice – Spud is the initial pelow a casing string.	spudding o	of the we	ell, not drilling
	Date/Time <u>11/18/2011</u>	0800 HRS	AM ✓	РМ
times	ng – Please report time cas s. Surface Casing Intermediate Casing Production Casing Liner Other	ing run star	ts, not c	ementing
	Date/Time <u>12/16/2011</u>	0800 HRS	AM ✓	РМ
	Initial BOPE test at surface BOPE test at intermediate 30 day BOPE test Other	<b>.</b>		RECEIVED NOV 1 & 2011 OIV. OF OIL, GAS & MINING
	Date/Time		AM 🗌	РМ
Rema	arks ESTIMATED DATE AND <del>LOVEL YOUNG AT 435.</del>	TIME. PLEA <del>781.7051 FO</del>	SE CON <del>R MORE</del>	TACT

#### STATE OF UTAH **DEPARTMENT OF NATURAL RESOURCES** DIVISION OF OIL, GAS AND MINING

## **ENTITY ACTION FORM**

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address:

1368 SOUTH 1200 EAST

city VERNAL

zip 84078 state UT

Phone Number: (435) 781-7024

Well 1

API Number	Well I	Well Name			Twp	Rng	County	
4304750610	NBU 921-21A3AS		NENE	21	98	21E	UINTAH	
Action Code	Current Entity Number			Spud Date		Entity Assignment Effective Date		
$\mathcal{B}$	99999	3900	1	1/18/20	11	11	130/11	
Comments: MIR	U PETE MARTIN BUCK	TRIG. BLKH	K=MV	RD=	WSY	NVD_		

SPUD WELL ON 11/18/2011 AT 0730 HRS.

BHC= NENE

	921-21A3DS		NENE	21	98	21E	UINTAH
Action Code Co	P4*4			21	98	21E	UNTAR
	ırrent Entity Number	New Entity Number	S	pud Da	te	Entity Assignment Effective Date	
B	99999	2900	1	1/18/20	11	1	1/30/11

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
comments:				namas de de la composição			

#### **ACTION CODES:**

A - Establish new entity for new well (single well only)

B - Add new well to existing entity (group or unit well)

C - Re-assign well from one existing entity to another existing entity

D - Re-assign well from one existing entity to a new entity

E - Other (Explain in 'comments' section)

RECEIVED

SHEILA WOPSOCK

Name (Please Print)

Signature

Title

**REGULATORY ANALYST** 

11/21/2011

Date

(5/2000)

NOV 2 1 2011

Sundry Number: 22215 API Well Number: 43047506110000

	STATE OF UTAH		FORM 9
ι	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0576
SUNDR	Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
	posals to drill new wells, significantly reenter plugged wells, or to drill horiz n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-21A3DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047506110000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 8021	<b>PHONE NUMBER:</b> 17 3779 720 929-	9. FIELD and POOL or WILDCAT: 65NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1025 FNL 0815 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NENE Section: 2	HIP, RANGE, MERIDIAN: 21 Township: 09.0S Range: 21.0E Meri	idian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPOI	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT     Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
1/13/2012	WILDCAT WELL DETERMINATION	OTHER	OTHER:
to proper property on	COMPLETED OPERATIONS. Clearly show	- United	<u> </u>
MIRU AIR RIG ON RAN SURFACE CAS	JAN. 11, 2012. DRILLED SUF SING AND CEMENTED. WELL OF CEMENT JOB WILL BE INC COMPLETION REPORT.	RFACE HOLE TO 2763'. IS WAITING ON ROTARY CLUDED WITH WELL	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 17, 2012
NAME (PLEASE PRINT) Jaime Scharnowske	<b>PHONE NUM</b> 720 929-6304	BER TITLE Regulartory Analyst	
SIGNATURE N/A		<b>DATE</b> 1/17/2012	

Sundry Number: 23965 API Well Number: 43047506110000 FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN	<del></del>	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0576
SUNDR	Y NOTICES AND REPORTS (	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
Do not use this form for procurrent bottom-hole depth, FOR PERMIT TO DRILL form	posals to drill new wells, significantly c reenter plugged wells, or to drill horizon n for such proposals.	leepen existing wells below Ital laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-21A3DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047506110000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	n Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 3779 720 929-6	9. FIELD and POOL or WILDCAT: 5NIATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1025 FNL 0815 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	<b>HIP, RANGE, MERIDIAN:</b> 11 Township: 09.0S Range: 21.0E Meridi	an: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start:	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
3/16/2012			
	OPERATOR CHANGE  PRODUCTION START OR RESUME	PLUG AND ABANDON  RECLAMATION OF WELL SITE	☐ PLUG BACK ☐ RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:			
	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
DRILLING REPORT	L TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
Report Date:	WATER SHUTOFF     ■	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER: Rig Release - ACTS Pit
MIRU ROTARY RIO MARCH 13, 2012. CEMENTED PRODU 16, 2012 @ 12:00 H WITH THE WELL O COMPLETION A REFURBISHED	COMPLETED OPERATIONS. Clearly show a G. FINISHED DRILLING FROM RAN 4-1/2" 11.6# HP-110 PR ICTION CASING. RELEASED HIRS. DETAILS OF CEMENT JOCOMPLETION REPORT. WELL INCTIVITIES. THE PIT ON THIS LOW AND UTILIZED AS PART OF TI	I 2,763' TO 11,240' ON CODUCTION CASING. &P 298 RIG ON MARCH B WILL BE INCLUDED S WAITING ON FINAL OCATION WILL BE HE ACTS SYSTEM.	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY March 28, 2012
NAME (PLEASE PRINT) Jaime Scharnowske	<b>PHONE NUMBE</b> 720 929-6304	Regulartory Analyst	
SIGNATURE		DATE	
N/A		3/17/2012	

Sundry Number: 25869 API Well Number: 43047506110000

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0576
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
	oposals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-21A3DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047506110000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	h Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 73779 720 929-	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1025 FNL 0815 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 21 Township: 09.0S Range: 21.0E Merid	tian: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICAT	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
✓ DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
5/16/2012	WILDCAT WELL DETERMINATION	OTHER	OTHER:
40. DECORUDE PROPOSED OR	COMPLETED OPERATIONS. Clearly show a	- United the state of the state	<u> </u>
THE SUBJECT WELL AT TIME 12:00 PM	WAS PLACED ON PRODUCT MITHE CHRONOLOGICAL WEI ED WITH THE WELL COMPLET	TION ON DATE 5/16/2012 LL HISTORY WILL BE	
NAME (PLEASE PRINT)	PHONE NUMB	ER TITLE	
Cara Mahler	720 929-6029	Regulatory Analyst I	
SIGNATURE N/A		<b>DATE</b> 5/18/2012	

Sundry Number: 27517 API Well Number: 43047506110000

	STATE OF UTAH		FORM 9
1	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	G	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0576
	Y NOTICES AND REPORTS ON	_	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
Do not use this form for procurrent bottom-hole depth, FOR PERMIT TO DRILL form	posals to drill new wells, significantly dee reenter plugged wells, or to drill horizonta n for such proposals.	epen existing wells below I laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-21A3DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047506110000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18tl	PH n Street, Suite 600, Denver, CO, 80217 37	IONE NUMBER: 779 720 929-6	9. FIELD and POOL or WILDCAT: 5NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1025 FNL 0815 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NENE Section: 2	HP, RANGE, MERIDIAN: 11 Township: 09.0S Range: 21.0E Meridian	: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE I	NATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
7/6/2012	WILDCAT WELL DETERMINATION	OTHER	OTHER:
Well was c	COMPLETED OPERATIONS. Clearly show all pompleted, finishing well compl	etion report.	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY July 09, 2012
NAME (PLEASE PRINT) Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	TITLE Regulartory Analyst	
SIGNATURE N/A		<b>DATE</b> 7/6/2012	

Sundry Number: 28513 API Well Number: 43047506110000

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	3	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0576
SUNDR	Y NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significantly deep reenter plugged wells, or to drill horizontal I n for such proposals.	en existing wells below aterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-21A3DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		<b>9. API NUMBER:</b> 43047506110000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	PHO n Street, Suite 600, Denver, CO, 80217 377	NE NUMBER: 9 720 929-6	9. FIELD and POOL or WILDCAT: 5NIATUERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1025 FNL 0815 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NENE Section: 2	IIP, RANGE, MERIDIAN: 1 Township: 09.0S Range: 21.0E Meridian: 3	S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICATE N	ATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE #	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
SUBSEQUENT REPORT	LI CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
Date of Work Completion:		FRACTURE TREAT	☐ NEW CONSTRUCTION
		PLUG AND ABANDON	PLUG BACK
SPUD REPORT Date of Spud:		RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
		SIDETRACK TO REPAIR WELL	L TEMPORARY ABANDON
✓ DRILLING REPORT		/ENT OR FLARE	WATER DISPOSAL
Report Date: 8/3/2012		SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
	COMPLETED OPERATIONS. Clearly show all peromple ompleted, finishing well comple		Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY August 06, 2012
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE	
Jaime Scharnowske	720 929-6304	Regulartory Analyst	
SIGNATURE N/A		<b>DATE</b> 8/3/2012	

Form 3160-4 (August 2007)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

•	WELL C	OMPL	ETION O	R REC	OMP	LETIC	N REP	ORT	AND L	.OG				ase Serial N TU0576	lo.	
1a. Type of		Oil Well			Dry								6. If 1	Indian, Allo	ttee or	Tribe Name
b. Type of	Completion	Othe		☐ Work	Over	☐ De	epen [	<b>」</b> Plug	Back	☐ Dif	ff. Re	esvr.	7. Un	it or CA Ap TU63047A	greeme	ent Name and No.
2. Name of KERR	Operator MCGEE OIL	& GAS	ONSHORE	Mail: ca			ARA MAH adarko.co							ase Name a BU 921-21		
3. Address	1099 18TH DENVER,			800					o. (include 9-6029	area co	ode)		9. AF	PI Well No.		43-047-50611
4. Location	of Well (Rep	ort locati	on clearly an	d in acco	rdance v	vith Fede	eral require	ements)	*				10. F	ield and Po ATURAL E	ol, or I	Exploratory
At surfac			L 815FEL 4				0214 W L	.on				ţ	11. S	ec., T., R.,	M., or	Block and Survey 9S R21E Mer SLB
At top p	rod interval r	_		_			44					ŀ	12. C	ounty or Pa		13. State
At total		IE 1268	NL 640FEL	***	41 1	4 4	6W_		0 1					INTAH	DD 1/1	UT
14. Date Sp 11/18/2	oudded 011			ite T.D. F 13/2012				3 D &	Complete A 🔀 5/2012	ed Ready	to Pr	od.	17. E	levations (1 482	9 GL	3, RT, GL)*
18. Total D		MD TVD	11240 11230		19. Pluį			MD TVD		210 200		20. Dept	h Brio	ige Plug Se		MD TVD
21. Type El DSN/SI	lectric & Oth D/ACTR-BH	er Mecha V-CBL/G	nical Logs R SR/COLLAR	ın (Subm S	nit copy	of each)				V	Vas D	vell cored OST run? ional Sur	j	🛛 No 📗	🗖 Yes	(Submit analysis) (Submit analysis) (Submit analysis)
23. Casing an	d Liner Reco	rd (Repo	ort all strings	set in we								r				
Hole Size	Size/Gi	rade	Wt. (#/ft.)	Top (MD		ottom (MD)	Stage Ce Dep			f Sks. & of Ceme		Slurry (BBI		Cement T	Гор*	Amount Pulled
20.000	1	000 STL	36.7		0	40					28					
11.000		25 IJ-55	28.0		0	2741	+		<b> </b>		670 945				0 380	
7.875	4.50	0 P-110	11.6		-	11254	<del> </del>				945	<u> </u>			300	
							<del>                                     </del>									
24. Tubing																
	Depth Set (M		acker Depth	(MD)	Size	Dept	h Set (MD	) P	acker De	pth (MI	D)	Size	De	pth Set (MI	D)	Packer Depth (MD)
2.375 25. Producis		0751	<del> </del>			1 26	Perforation	n Reco	ord				Ь			
	ormation		Тор		Botton				Interval		Т	Size	T	lo. Holes	Γ	Perf. Status
A)	MESAVE	RDE		0720		104	1 (1)		0720 TC	1110	4	0.36			OPE	
B)																
C)																
D)					·			····							L	
	racture, Treat		ment Squeeze	, Etc.							^^ -					
	Depth Interva		404 PUMP 3	920 DDI	e el lei	( H2O 8	183,536 LE		mount and			aterial				
	1072	0 TO 11	104 FUNE /	,029 BBL	-S SLICE	( n20 a	103,330 LE	30/0	OOTTAW	A SAN						
							······································									
28. Product	ion - Interval	A														
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF		Water BBL	Oil G Corr.			Jas Gravity		Producti	on Method		
05/16/2012	05/17/2012	24		0.0	- 1	93.0	480.0							FLOV	VS FR	OM WELL
Choke Size	Tbg. Press. Flwg. 1055	Csg.	24 Hr. Rate	Oil BBL	Gas MCF		Water BBL	Gas:C Ratio	il	V	Vell St	atus		,		
20/64	SI 1055	1800.0	I	0		593	480				p	GW				
28a. Produc	ction - Interva	l B														
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF		Water BBL	Oil G Corr.			Gas Gravity		Product	ion Method		
				L												RECFIVE
Choke Size	Tbg. Press. Fiwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCI		Water BBL	Gas:C Ratio	)il	V	Well St	atus				RECEIVE
	51	<u> </u>		<u> </u>	L_											4 3 20

28b. Prod	uction - Inter	val C							· · · · · · · · · · · · · · · · · · ·			
Date First	Test	Hours	Test Production	Oil	Gas	Water	Oil Gravity	Ga		Production Method		
Produced	Date	Tested	Production	BBL	MCF	BBL	Corr. API		avity			
Choke Size	Tog. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	w	ell Status			
	SI							·	-			
	uction - Inter											
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Ga Gr	as ravity	Production Method		
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	W	ell Status			
29. Dispo		(Sold, used	for fuel, vent	ed, etc.)	<u> </u>							
	·	s Zones (In	clude Aquife	rs):					31. For	mation (Log) Mar	rkers	······································
Show tests,	all importan	t zones of p	orosity and c	ontents the		ed intervals and all en, flowing and sl		es		( 0)		
	Formation		Тор	Bottom		Descriptions	, Contents, et	c.		Name		Top Meas. Depth
The f surfa LTC	irst 210? of ce hole was	the surfact drilled with from 5045	th an 11? bit 5? to 11,254	drilled with . P-110 Do	QX csa v	bit. The remain vas run from sur chronological w	face to 5045	·?;	BIF MA WA	EEN RIVER RD'S NEST HOGANY SATCH SAVERDE		1689 1983 2304 4995 8262
	e enclosed at ectrical/Mecl		s (1 full set re	eq'd.)	<del></del>	2. Geologic R	Leport		3. DST Re	port	4. Direction	nal Survey
5. Su	ındry Notice	for plugging	g and cement	verification	o.	6. Core Analy	rsis		7 Other:			
34. I here	by certify th	at the forego	oing and atta	hed inform	ation is c	omplete and corre	ect as determin	ned from	all available	records (see atta	ched instruction	ons):
			Elect	ronic Subr For KER	nission #1 R MCGE	143061 Verified l EE OIL & GAS C	oy the BLM V ONSHORE L	Well Info	ormation Sy the Vernal	stem.		
Name	e (please prin	t) CARA M	MAHLER				Title	AUTHO	RIZED REF	PRESENTATIVE	<u> </u>	
Signa	iture	(Electro	nic Submiss	ion)			Date	07/17/20	012			
Title 18 U	U.S.C. Section	n 1001 and	Title 43 U.S	C. Section	1212, ma	ike it a crime for a representations as	ny person kno to any matter	owingly a within it	and willfully s jurisdiction	to make to any d	epartment or a	gency

#### **Operation Summary Report**

Well: NBU 921-21A3DS GREEN Spud Date: 1/11/2012 Project: UTAH-UINTAH Site: NBU 921-21A PAD Rig Name No: PROPETRO 11/11, H&P 298/298 Event: DRILLING End Date: 3/16/2012 Start Date: 11/10/2011

UWI: NE/NE/0/9/S/21/E/21/0/0/26/PM/N/1025/E/0/815/0/0

Active Datum: RKB @4,855.00usft (above Mean Sea

3:00

- 6:30

6:30 - 7:30

DRLSUR

DRLSUR

3.50

1.00

С

В

Ρ

12

12

Level)

vel)	(L) (G 1,000.0000)	abovo moan c	,cu										
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation					
1/11/2012	11:00 - 12:30	1.50	MIRU	01	В	Р		SKID RIG 10' TO NBU 921-21A3AS (WELL3 OF 4). INSTALL DIVERTOR HEAD AND BLUEY LINE. BUILD DITCH. SPOT IN RIG. SPOT IN CATWALK AND PIPE RACKS. RIG UP PIT PUMP. RIG UP PUMP. PRIME PUMP. INSPECT RIG. HELD PRE-SPUD SAFETY MEETING.					
	12:30 - 14:00	1.50	MAINT	07	Α	Р		SERVICE RIG					
	14:00 - 15:30	1.50	DRLSUR	02	D	Р		SPUD 14:00, DRILL 12:25" HOLE 44'- 210'. (166', 83'/HR) RPM=45, WOB 5-15K. PSI ON/OFF 600/400. UP/DOWN/ ROT 20/20/20 K, DRAG 0 K, CIRC RESERVE W. 8:3# WATER. DRILL DOWN TO 210' W/6" COLLARS.					
	15:30 - 17:30	2.00	DRLSUR	06	Α	Р		POOH, PU, 11" BIT AND DIRECTIONAL TOOLS, TIH T/					
	17:30 - 18:30	1.00	DRLSUR	02	D	P		DRILL F/210 T/300 (90' @ 90' PER HR) WOB 20K, PSI ON/OFF 600/400, RPM 45 UP/DWN/ROT 20/20/20					
	18:30 - 19:30	1.00	MAINT	08	Α	Z		WORK ON PUMP					
	19:30 - 0:00	4.50	DRLSUR	02	D	Р		DRILL F/300 T/940 (640' @ 142' PER HR) WOB 20K, PSI ON/OFF 1100/900, RPM 45 UP/DWN/ROT 60/50/55					
1/12/2012	0:00 - 12:00	12.00	DRLSUR	02	D	P		DRILL F/940-2230 (1290' @ 107.5' PER HR) WOB 20K, PSI ON/OFF 1700/1500, RPM 40 UP/DWN/ROT 79/68/73					
	12:00 - 19:30	7.50	DRLSUR	02	D	Р		DRILL F2230-2763 (533' @ 71' PER HR) WOB 20K, PSI ON/OFF 1800/1600, RPM 40 UP/DWN/ROT 84/74/80 TD WELL 19:30					
	19:30 - 21:30	2.00	DRLSUR	05	Ð	P		CIRC F/CSNG					
	21:30 - 0:00	2.50	DRLSUR	06	D	Р		LDDS					
1/13/2012	0:00 - 2:00	2.00	DRLSUR	06	D	Р		LD DIR TOOLS & BIT					
	2:00 - 3:00	1.00	DRLSUR	12	Α	Р		MOVE PIPE RACKS AND CATWALK. PULL					

DIVERTER HEAD, RIG UP TO RUN CSG, AND MOVE

RUN 61 JTS 8 5/8, 28# CSNG. SHOE SET @ 2719",

HOLD SAFETY MEETING, RUN 200' OF 1". RIG DOWN RIG MOVE OFF WELL, REBUILD DITCH. RIG UP CEMENT TRUCK, 2" HARD LINES,. CEMENT HEAD, LOAD PLUG. LAND CSNG @ 06:30

CSG INTO POSITION TO P/U.

**BAFFLE SET @ 2673"** 

2:57:46PM 6/29/2012

## **Operation Summary Report**

Spud Date: 1/11/2012 Well: NBU 921-21A3DS GREEN Project: UTAH-UINTAH Site: NBU 921-21A PAD Rig Name No: PROPETRO 11/11, H&P 298/298 Event: DRILLING Start Date: 11/10/2011 End Date: 3/16/2012

∍l)								
Date	<b>医</b> 阿拉萨克克	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U MD From (usff)	Operation
	7:30	- 9:30	2.00	DRLSUR	12	E	P	PRESSURE TEST LINES TO 2000 PSI. PUMP 160 BBLS OF WATER AHEAD. PUMP 20 BBLS OF 8.3# GEL WATER AHEAD. PUMP (220 SX) 149.6 BBLS OF 11.0# 3.82 YD 23 GAL/SK PREMIUM CEMENT. PUMP 200 SX TAIL (41 BBLS),15.8#, 1.15 YIELD. DROP PLUG ON FLY. DISLPACE WITH 166.67 BBLS OF H20. FULL CIRC THROUGHOUT. FINAL LIFT 500 PSI AT 4 BBLS MIN. BUMP PLUG WITH 800 PSI HELD FOR 5 MIN. FLOAT HELD. PUMP 125 SX (30.72 BBLS) OF SAME TAIL CEMENT WITH 2% CACL DOWN 1". SHUT DOWN AND CLEAN TRUCK. CEMENT TO SURFACE FELL BACK
	9:30	- 11:00	1.50	DRLSUR	13	Α	Р	WOC
	11:00	- 11:00	0.00	DRLSUR	12	E	Р	PUMP 125 SKS (25.6BBLS) DOWN BACKSIDE. CMT TO SURFACE. STAYED RELEASE RIG 11:00
3/6/2012	16:00	- 19:30	3.50	MIRU	01	С	Р	PREPARE & SKID 20' TO NBU 921 21A3DS / CENTER RIG OVER WELL
		- 20:30	1.00	MIRU	01	В	Р	RIG UP ROTARY TOOLS
	20:30	- 21:00	0.50	PRPSPD	14	Α	Р	NU BOP'S & EQUIPMENT
	21:00	- 22:00	1.00	PRPSPD	01	В	Р	INSTALL DRILLING BAILS
	22:00	- 0:00	2.00	PRPSPD	15	Α	<b>P</b> .	TEST BOP'S & EQUIPMENT AS PER PROGRAM 250 LOW / 5000 PSI HIGH
3/7/2012	0;00	- 3:30	3,50	PRPSPD	15	Α	P	CONTINUE TO TEST BOP AND EQUIPMENT AS PER PROGRAM 250 LOW 5000 HI / 250 / 2500 ON ANNULAR
	3:30	- 4:30	1.00	PRPSPD	15	Α	Р	TEST STRATA PRESSURE CONTROL EQUIPMENT
	4:30	- 5:00	0.50	PRPSPD	14	В	Р	INSTALL WEAR BUSHING
	5:00	- 7:00	2.00	PRPSPD	06	Α	Р	PICK UP & MAKE UP DIRECTIONAL BHA # 1 WITH WEATHERFORD, CHANGE EMITTER SUB, SCRIBE, ORIENTATE & TEST SAME
	7:00	- 8:30	1.50	PRPSPD	06	Α	P	TIH WITH BIT & BHA# 1 TO 2,647' TAG CEMENT
	8:30	- 9:00	0.50	PRPSPD	23		Р	PRE SPUD MEETING & WALK AROUND
	9:00	- 10:00	1.00	PRPSPD	09	Α	Р	PRE JOB SAFETY MEETING CUT & SLIP 115' DRILL LINE
		- 11:30	1.50	PRPSPD	07	В	Р	LEVEL DERRICK & INSTALL ROTAING HEAD
		- 12:30	1.00	DRLPRO	02	F	Р	DRILL CEMENT & SHOE TRACK F/ 2,641' TO 2,741' CLEAN OUT RATHOLE TO 2,785'
	12:30	- 16:00	3.50	DRLPRO	02	D	P	DRILL / SURVEY F/ 2,785' TO 3,281' = 496 ' @ 141.71 FPH  WOB 20,000-24,000  TOP DRIVE RPM 40-70  MUD MOTOR RPM 88  PUMPS 120 SPM=550 GPM  PUMP PRESSURE ON/OFF BTM 1,920/ 1,650  TORQUE ON/OFF BTM 5,000/ 2,000  PICK UP WT 115,000
								SLACK OFF WT 92,000 ROT WT 102,000
	16:00	- 16:30	0.50	DRLPRO	07	Α	Р	MUD WT 8.4 VIS 27 SERVICE RIG @ 3,281'

6/29/2012 2:57:46PM

Vell: NBU 921-	21A3DS GREEN					Spud Date:	: 1/11/2012		
Project: UTAH-l	UINTAH		Site: NBL	J 921-21A	PAD		Rig Name No: PROPETRO 11/11, H&P 298/298		
vent: DRILLIN	G		Start Date	e: 11/10/2	.011		End Date: 3/16/2012		
active Datum: F	RKB @4,855.00usft (al	bove Mean S	ea	UWI: NE/NE/0/9/S/21/E/21/0/0/26/PM/N/1025/E/0/815/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U MD Fron	n Operation		
3/8/2012	18:30 - 0:00 0:00 - 6:00	7.50 6.00	DRLPRO	02	D D	P (usft)	DRILL / SLIDE / SURVEY F/ 3,281' TO 4,225' = 944 ' @ 125.86 FPH WOB 20,000-24,000 TOP DRIVE RPM 45-70 MUD MOTOR RPM 88 PUMPS 120 SPM=550 GPM PUMP PRESSURE ON/OFF BTM 1,950/ 1,725 TORQUE ON/OFF BTM 8,000/ 4,000 PICK UP WT 140,000 SLACK OFF WT 98,000 ROT WT 120,000 SLIDE 58' IN 65 MIN 3.8% OF FOOTAGE DRILLED,9.02 OF HRS DRILLED MUD WT 8.5 VIS 27 DRILL / SURVEY F/ 4,225' TO 4,958' = 733 ' @ 121.61 FPH WOB 20,000-24,000 TOP DRIVE RPM 40-70 MUD MOTOR RPM 88 PUMPS 120 SPM=550 GPM PUMP PRESSURE ON/OFF BTM 1,950/ 1,725 TORQUE ON/OFF BTM 8,000/ 4,000 PICK UP WT 148,000 SLACK OFF WT 98,000		
	6:00 - 6:30	0.50	DRLPRO	08	В	Z	SLIDE 55' IN 60 MIN 9.29% OF FOOTAGE DRILLED,16.66 %OF HRS DRILLED ROT WT 119,000 MUD WT 8.4 VIS 27 REPAIR ENCODER ON TOP DRIVE		
	6:30 - 7:00	0.50	DRLPRO	07	A	P	SERVICE RIG		
	7:00 - 17:00	10.00	DRLPRO	02	D	P	DRILL / SURVEY F/ 4,958' TO 6,116' = 1,158 ' @ 115.8 FPH WOB 20,000-24,000 TOP DRIVE RPM 40-70 MUD MOTOR RPM 88 PUMPS 120 SPM=550 GPM PUMP PRESSURE ON/OFF BTM 2000/1775 TORQUE ON/OFF BTM 11,000/ 6,000 PICK UP WT 165,000 SLACK OFF WT 128,000 ROT WT 146,000 MUD WT 8.5 VIS 27		
	17:00 - 19:00	2.00	DRLPRO	22	G	X	LOST TOTAL RETURNS @ 6,116' PULL BACK TO 5,925' MIX & PUMP 10' TO 15% LCM PILLS REGAIN CIRC / 350 BBL LOSE		

6/29/2012 2:57:46PM

3

					Opera	tion S	Summa	ary Report	
Well: NBU 921-2	1A3DS GRE	EN			- 100 AND			Spud Date: 1/1	1/2012
Project: UTAH-U	INTAH			Site: NBU	921-21A	PAD			Rig Name No: PROPETRO 11/11, H&P 298/298
Event: DRILLING	······			Start Date	· 11/10/2	011			End Date: 3/16/2012
Active Datum: Ri		Mueft (ab	ove Mean S				/S/21/F/2	1/0/0/26/PM/N/102	
Level)	ND (W4,000.0	ousit (ab	ove ivicali 3	Ca		21120,0	.0,2,,2,2	1707072071 141714 102	20,2,0,0,0,0
Date	Tim	e l	Duration	Phase	Code	Sub	P/U	MD From	Operation
	Start-l		(hr)			Code		(usft)	
	19:00 -	0:00	5.00	DRLPRO	02	D	Р		DRILL / SURVEY F/ 6,116' TO 6,445" = 329 ' @ 65.8
									FPH
									WOB 20,000-24,000
									TOP DRIVE RPM 40-70
									MUD MOTOR RPM 88
									PUMPS 75-100 SPM=340-450 GPM
									PUMP PRESSURE ON/OFF BTM 1950/1720
									TORQUE ON/OFF BTM 8,000/ 5,000
									PICK UP WT 174,000
									SLACK OFF WT 144,000
									ROT WT 155,000
									MUD WT 8.7 VIS 31
									LCM 4%
									MUD LOSE 120 BBL
3/9/2012	0:00 -	10:00	10.00	DRLPRO	02	D	Р		DRILL / SURVEY F/ 6,425' TO 7,060' = 635' @ 63.5 FPH
									WOB 22,000-26,000
									TOP DRIVE RPM 40-70
									MUD MOTOR RPM 54 / 75
									PUMPS 75-105 SPM=340-472 GPM
									PUMP PRESSURE ON/OFF BTM 1950/1750
									TORQUE ON/OFF BTM 8,000/ 6,000
									PICK UP WT 185,000
									SLACK OFF WT 148,000
									ROT WT 162,000
									SLIDE 55' IN 60 MIN 9.29% OF FOOTAGE
									DRILLED,16.66 %OF HRS DRILLED
									MUD WT 8.9-9.0 VIS 33
									LCM 4%
	10:00 -	10:20	0.50	ממ ומת	07	۸	р		MUD LOSE 50 BBL
	10:30 -		0.50	DRLPRO DRLPRO	07 02	A D	P P		SERVICE RIG @ 7,060'
	10.00	0.00	13.50	DKLPKU	02	U	۲		DRILL / SURVEY F/7,060' TO 7,850' = 790' @ 58.51
									1MOR 22 000 27 000
									WOB 23,000-27,000
									TOP DRIVE RPM 40-70
									MUD MOTOR RPM 72-79
									PUMPS 100-110 SPM= 450-495 GPM
									PUMP PRESSURE ON/OFF BTM 2200 / 1975
									TORQUE ON/OFF BTM 10,000/ 8,000
									PICK UP WT 196,000
									SLACK OFF WT 156,000
									ROT WT 177,000
									MUD WT 8.9-9.0 VIS 34
									LCM 4%
									MUD LOSE 50 BBL

6/29/2012 2:57:46PM

					U	S ROC	KIES RI	EGION	
					Opera	tion S	Summa	ıry Report	
Vell: NBU 921-2	1A3DS (	GREEN						Spud Date: 1/11	/2012
roject: UTAH-U	INTAH			Site: NBU	921-21A	PAD			Rig Name No: PROPETRO 11/11, H&P 298/298
vent: DRILLING	3			Start Date	∋: 11/10/2	:011			End Date: 3/16/2012
ctive Datum: RI	KB @4,8	355.00usft (al	oove Mean Se	ea	UWI: NE	E/NE/0/9/	/S/21/E/21	/0/0/26/PM/N/102	5/E/0/815/0/0
Date	1.00 8.90 0.00	Time tart-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
3/10/2012	6:00	- 6:00 - 16:30	6.00	DRLPRO	02	D	P		DRILL / SURVEY F/7,850' TO 8,193' =343' @ 57.16 FPH WOB 23,000-27,000 TOP DRIVE RPM 40-70 MUD MOTOR RPM 72-79 PUMPS 100-110 SPM= 450-495 GPM PUMP PRESSURE ON/OFF BTM 2200 / 1975 TORQUE ON/OFF BTM 10,000/ 8,000 PICK UP WT 196,000 SLACK OFF WT 156,000 ROT WT 177,000 MUD WT 9.0 VIS 39 LCM 4% MUD LOSE 50 BBL DRILL / SLIDE /SURVEY F/ 8,193' TO 8,760' = 567' @ 54 FPH WOB 23,000-27,000 TOP DRIVE RPM 40- 55 MUD MOTOR RPM 79 PUMPS 100-110 SPM= 495 GPM PUMP PRESSURE ON/OFF BTM 2350 / 2050 TORQUE ON/OFF BTM 10,000/ 8,000 PICK UP WT 208,000 SLACK OFF WT 168,000 ROT WT 189,000 SLIDE 42' IN 110 MIN 7.4% OF FOOTAGE DRILLED, 17.4 %OF HRS DRILLED MUD WT 9.0 VIS 36 LCM 4%
	16:30	- 17:00	0.50	DRLPRO	22	L	Z		MUD LOSE 30 BBL CHANGE OUT STRATA ROTATING ELEMENT ( RUBBER LEAKING)
	17:00	17:30	0.50	DRLPRO	07	Α	Р		SERVICE RIG @ 8,760'
	17:30	- 20:30	3.00	DRLPRO	02	D	P		DRILL / SURVEY F/ 8,760' TO 8,955' =195' @ 65 FPH WOB 27,000 TOP DRIVE RPM 40-70 MUD MOTOR RPM 72-79 PUMPS 110 SPM= 495 GPM PUMP PRESSURE ON/OFF BTM 2200 / 1975 TORQUE ON/OFF BTM 10,000/ 8,000 PICK UP WT 196,000 SLACK OFF WT 156,000 ROT WT 177,000 MUD WT 9.1 VIS 35 LCM 4% 20 BBL MUD LOSE
	20:30	- 23:30	3.00	DRLPRO	22	L	Z		ATTEMPT TO BRING STRATA ON LINE CHOKE PLUGGED OFF / CIRC OUT GAS THROUGH RIG CHOKE @ 40 SPM @ 450 PSI ON DRILL PIPE & 440 PSI ON ANNULAS MEANWHILE UNPLUG STRATA CHOKE

6/29/2012 2:57:46PM

CHOKE

5

				Ú.	S ROC	KIES RI	EGION
				Opera	tion S	Summa	ary Report
Vell: NBU 921-	21A3DS GREEN						Spud Date: 1/11/2012
Project: UTAH-I	JINTAH		Site: NBU	921-21A	PAD		Rig Name No: PROPETRO 11/11, H&P 298/298
vent: DRILLIN	G		Start Date	: 11/10/2	011		End Date: 3/16/2012
Active Datum: F .evel)	RKB @4,855.00usft (al	bove Mean Se	a	UWI: NE	E/NE/0/9/	/S/21/E/21	1/0/0/26/PM/N/1025/E/0/815/0/0
.evei) Date	Time	Duration	Phase	Code	Sub	P/U	MD From Operation
<b></b>	Start-End	(hr)	1 Hase	Gode	Code	1,70	MD From Operation (usft)
	23:30 - 0:00	0.50	DRLPRO	02	D	P	DRILL / SURVEY F/ 8,955' TO 8,995' =40' @ 80 FPH WOB 27,000 TOP DRIVE RPM 55 MUD MOTOR RPM 72-79 PUMPS 110 SPM= 495 GPM PUMP PRESSURE ON/OFF BTM 2425 / 2240 TORQUE ON/OFF BTM 10,000/ 8,000 PICK UP WT 220,000 SLACK OFF WT 168,000 ROT WT 192,000 MUD WT 9.1 VIS 39 / RAISE MUD WT
3/11/2012	0:00 - 13:30 13:30 - 14:00	12.50	DRLPRO	02	D	P	LCM 4%  STRATA ON LINE 130 PSI W/ 10' FLARE  DRILL / SURVEY F/ 8,995' TO 9,706' = 711' @ 56.88  FPH  WOB 24,000 - 27,000  TOP DRIVE RPM 45-60  MUD MOTOR RPM 72-79  PUMPS 105 - 110 SPM = 472 - 495 GPM  PUMP PRESSURE ON/OFF BTM 2,360 - 2,177  TORQUE ON/OFF BTM 11,000/ 8,000  PICK UP WT 229,000  SLACK OFF WT 176,000  ROT WT 201,000  MUD WT 9.5 VIS 39 / RAISE MUD WT  LCM 4%  STRATA ON LINE 80-120 PSI W/ 10' - 20' FLARE  MOVE CLOCK 1 HR FOR DAYLIGHT SAVINGS TIME
	13:30 - 14:00 14:00 - 0:00	0.50	DRLPRO	07	Α -	P -	SERVICE RIG @ 9,706' / BOP DRILL
		10.00	DRLPRO	02	D	P	DRILL / SURVEY F/ 9,706' TO 10,090' =384' @ 38.4 FPH WOB 24,000 - 27,000 TOP DRIVE RPM 45-60 MUD MOTOR RPM 72-79 PUMPS 105 - 110 SPM = 472 - 495 GPM PUMP PRESSURE ON/OFF BTM 2,500 - 2,275 TORQUE ON/OFF BTM 13,000/ 11,000 PICK UP WT 238,000 SLACK OFF WT 180,000 ROT WT 208,000 MUD WT 9.7 VIS 39 / RAISE MUD WT LCM 4% 30 BBL MUD LOSE STRATA ON LINE 80-120 PSI W/ 10' - 20' FLARE

6/29/2012 2:57:46PM

6

Project UTAH-UINTAH	Well: NBU 921-2	218305	GREEN		<u> </u>		PARTE VIT		Spud Date: 1/11/2012
Event   DRILLING   Start Date: 11/10/2011   End Date: 3/16/2012			OILLIN	w. <del></del>	Site: NBL	J 921-21A	PAD	• • • • • • • • • • • • • • • • • • • •	
Active Datum: RKB @4,855.00u8f (above Mean See   UM: NENEDVIS/S21/EZ1/00/26/PM/NY102/9E/08/15/100   Date   Time					<del></del>			1	
Date   Time			355.00usft (al	ove Mean Se		·	<del></del>	S/21/E/21/	
Stark-End	Level)		`						
27.8 FPH WORD 24 000 - 27,000 TOP DRIVE PRIM \$5-90 MUD MOTOR PRIM \$7-90	Date		tart-End		Phase	Code	100000000000000000000000000000000000000	P/U	
10:30 - 0:00 13:50 DRLPRO 02 D P  DRILL SURVEY F/10,368" TO 10,660" =292" @ 16:2 FPH WDB 24,000 - 27,000 TOP DRIVE RPM 35-40 MUD MOTOR RPM 72 PUMPP SISSURE ON/OFF BTM 2,725 - 2,425 TORQUE ON/OFF BTM 13,000/ 12,000 PICK UP WT 254,000 SLACK OFF WT 190,000 ROT WT 214,000 MUD WT 10.0 VIS 39 LCM 3% NO MUD LOSE STRATA ON LINE 80-280 PSI WI 10" - 20" FLARE WDB 30 TOP DRIVE RPM 55 MUD MOTOR RPM 72 PUMPP SISSURE ON/OFF BTM 2725 - 2,425 TORQUE ON/OFF BTM 3,000/ 12,000 PICK UP WT 254,000 MUD WT 10.0 VIS 39 LCM 3% NO MUD LOSE STRATA ON LINE 80-280 PSI WI 10" - 20" FLARE WDB 30 TOP DRIVE RPM 55 MUD MOTOR RPM 72 PUMPP RESSURE ON/OFF BTM 2860- 2,440 TORQUE ON/OFF BTM 12,000/ 10,000 PICK UP WT 264,000 MID WT 11.4 VIS 39 LCM 5% 388 MUD LOSE STRATA ON LINE 80-280 PSI WI 10" - 20" FLARE DIMPLEY 11.4 VIS 39 LCM 5% 388 MUD LOSE STRATA ON LINE 80-280 PSI WI 10" - 20" FLARE CIRCULATE & CONDITION MUD @ 11,240" PICK UP WT 264,000 MID WT 11.4 VIS 39 LCM 5% STRATA ON LINE 80-280 PSI WI 10" - 20" FLARE CIRCULATE & CONDITION MUD @ 11,240" PICK UP WT 264,000 MID WT 11.4 VIS 39 LCM 5% STRATA ON LINE 80-280 PSI WI 10" - 20" FLARE CIRCULATE & CONDITION MUD @ 11,240" PROBLEMS  3/14/2012 0.00 - 3.00 3.00 DRLPRO 06 E P WPER TRIP / TOOH FOOM 11,240 TO 9,450 WITH NO PROBLEMS	3/12/2012								27.8 FPH WOB 24,000 - 27,000 TOP DRIVE RPM 3560 MUD MOTOR RPM 72-79 PUMPS 105 - 110 SPM = 472 - 495 GPM PUMP PRESSURE ON/OFF BTM 2,500 - 2,275 TORQUE ON/OFF BTM 13,000/ 11,000 PICK UP WT 240,000 SLACK OFF WT 185,000 ROT WT 210,000 MUD WT 9.8 VIS 39 LCM 3% NO MUD LOSE STRATA ON LINE 80-140 PSI W/ 10' - 20' FLARE
21.62 FPH WOB 24,000 - 27,000 TOP DRIVE RPM 35-40 MUD MOTOR RPM 72 PUMPS 100 SPM - 450 GPM PUMP PRESSURE ON/OFF BTM 12,000 12,000 PICK UP WT 244,000 MUD WT 10.0 VIS 39 LCM 3% NO MUD LOSE STRATA ON LINE 80-280 PSI W/ 10' - 20' FLARE WOB 30 TOP DRIVE RPM 55 MUD MOTOR RPM 72 PUMPS 100 SPM - 450 GPM PUMP PRESSURE ON/OFF BTM 12,000/12,000 PICK UP WT 254,000 MUD WT 10.0 VIS 39 LCM 3% NO MUD LOSE STRATA ON LINE 80-280 PSI W/ 10' - 20' FLARE WOB 30 TOP DRIVE RPM 55 MUD MOTOR RPM 72 PUMPS 100 SPM - 450 GPM PUMP PRESSURE ON/OFF BTM 12,000/10,000 PICK UP WT 264,000 ROT WT 224,000 MUD WT 11.4 VIS 39 LCM 5% 388 MUD LOSE STRATA ON LINE 80-280 PSI W/ 10' - 20' FLARE PUMPS 100 SPM - 450 GPM PUMP PRESSURE ON/OFF BTM 12,000/10,000 PICK UP WT 264,000 ROT WT 224,000 MUD WT 11.4 VIS 39 LCM 5% 388 MUD LOSE STRATA ON LINE 80-280 PSI W/ 10' - 20' FLARE PUMPS 100 SPM - 450 GPM PUMP RESSURE ON/OFF BTM 12,000/10,000 PICK UP WT 264,000 PIC									
29 FPH WOB 30 TOP DRIVE RPM 55 MUD MOTOR RPM 72 PUMPS 100 SPM = 450 GPM PUMP PRESSURE ON/OFF BTM 2660- 2,440 TORQUE ON/OFF BTM 12,000/ 10,000 PICK UP WT 264,000 SLACK OFF WT 200,000 ROT WT 224,000 MUD WT 11.4 VIS 39 LCM 5% 385 MUD LOSE STRATA ON LINE 80-280 PSI W/ 10' - 20' FLARE 20:00 - 22:00									21.62 FPH WOB 24,000 - 27,000 TOP DRIVE RPM 35-40 MUD MOTOR RPM 72 PUMPS 100 SPM = 450 GPM PUMP PRESSURE ON/OFF BTM 2,725 - 2,425 TORQUE ON/OFF BTM 13,000/ 12,000 PICK UP WT 254,000 SLACK OFF WT 190,000 ROT WT 214,000 MUD WT 10.0 VIS 39 LCM 3% NO MUD LOSE
22:00 - 0:00 2.00 DRLPRO 06 E P WPER TRIP / TOOH FROM 11,240 TO 9,450 WITH NO PROBLEMS  3/14/2012 0:00 - 3:00 3.00 DRLPRO 06 E P WIPER TRIP / TOOH TO SHOE @ 2,741' WITH NO PROBLEMS	3/13/2012								29 FPH WOB 30 TOP DRIVE RPM 55 MUD MOTOR RPM 72 PUMPS 100 SPM = 450 GPM PUMP PRESSURE ON/OFF BTM 2660- 2,440 TORQUE ON/OFF BTM 12,000/ 10,000 PICK UP WT 264,000 SLACK OFF WT 200,000 ROT WT 224,000 MUD WT 11.4 VIS 39 LCM 5% 385 MUD LOSE STRATA ON LINE 80-280 PSI W/ 10' - 20' FLARE
PROBLEMS  3/14/2012 0:00 - 3:00 3.00 DRLPRO 06 E P WIPER TRIP / TOOH TO SHOE @ 2,741' WITH NO PROBLEMS									~ · ·
PROBLEMS	3/14/2012								
								_	PROBLEMS
3:00 - 3:30									
3:30 - 7:30									TO BTM / NO FILL / NO PROBLEMS

6/29/2012 2:57:46PM

### **Operation Summary Report**

Well: NBU 921-21A3DS GREEN Spud Date: 1/11/2012 Project: UTAH-UINTAH Site: NBU 921-21A PAD Rig Name No: PROPETRO 11/11, H&P 298/298 Event: DRILLING End Date: 3/16/2012 Start Date: 11/10/2011

Active Datum: PKP @4 855 Mueft (shove Mean Sea LIWI: NE/NE/0/9/S/21/E/21/0/0/26/PM/N/1025/E/0/815/0/0

tive Datum: R vel)	isft (above Mean S	Sea	UWI: NE/NE/0/9/S/21/E/21/0/0/26/PM/N/1025/E/0/815/0/0								
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation			
	10:30 - 0:0	00 13.50	DRLPRO	06	В	P		SPOT 100 BBLS 12.5# MUD ON BOTTOM, PULL 15 STDS, PUMP SLUG, TOH LAYING DOWN DRILL STRING TO 1,200 FT ,RUN 21 STANDS DRILL PIPE RACKED IN DERRICK IN HOLE, CONTINUE TO LAY DOWN DRILL STRING AND HWDP.			
3/15/2012	0:00 - 1:0		EVALPR	06	В	Р		LAY DOWN DIRECTIONAL TOOLS, BIT & M MTR			
	1:00 - 7:	30 6.50	EVALPR	11	G	Р		HSM R/U HALLIBURTON,RUN OPEN HOLE LOGS,BRIDGED OUT @ 9,692 FT , LOG OUT TO SURFACE, RIG DOWN			
	7:30 - 8;	30 1.00	CSGPRO	14	В	Р		PULL WEAR BUSHING, CHANGE OUT DRILLING BAILS TO CASING BAILS			
	8:30 - 9:	30 1,00	CSGPRO	12	Α	Р		REVIEW CTJSA RIG UP FRANKS TO RUN 41/2 CASING			
	9:30 - 11:	30 2.00	CSGPRO	12	С	P		RUN 40' JTS(1750') 4 1/2" 11.6# LTC CSG, AFTER REMOVING CASING CLAMP FROM CASING,AND PULLING SLIPS,ROPE IN SLIP HANDLE CAUGHT IN CASING CLAMP,PULLING IT AND CAUSING IT TO GO DOWN HOLE			
	11:30 - 12:	30 1.00	CSGPRO	19	Α	Z		CASING CLAMP DROPPED DOWN INSIDE BOP STACK, 6' FROM TOP/ CLOSED ANNULAR PREVENTER, FISH OUT CASING CLAMP W/ HOOK			
	12:30 - 23:	00 10.50	CSGPRO	12	С	P		RUN 147' JTS(6,187') 4 1/2" 11.6# LTC CSG, ' 117 JTS(5,037) P-110,11.6# DQX 4.5 CASING + BREAKING CIRCULATION @ SELECTED INTERVALS, WASH THRU BRIDGE @ 9,700 WASH DOWN LAST 2 JTS CASING SHOE @ 11,228' FC @ 11,186 BH MKR 10,627, MV MKR 7,941 X/O DQX 5,037			
	23:00 - 0;	00 1.00	CSGPRO	05	D	Р		CIRC CASING,RIG DOWN CASING EQUIP,CTJSA W/BJ			
3/16/2012	0:00 - 2:		CSGPRO	05	D	P		CIRC CASING,RIG DOWN CASING EQUIP,CTJSA W/			
	2:00 - 5:	00 3.00	CSGPRO	12	E	<b>P</b>		INSTALL BJ CMT HEAD, TEST PUMP & LINES TO 5,000 PSI, DROP BOTTOM PLUG PUMP 5 BBLS FW 40 BBLS SEAL BOND SPACER @11.5# PUMP 510 SKS LEAD CEMENT @ 12.0 PPG, (PREM LITE II + .0.25 pps CELLO FLAKE + 10 pps KOL SEAL + .05 lb/sx STATIC FREE + 6% bwoc BENTONITE + .4% bwoc SODIUM META SILICATE +3 % R-3 + 119.7% FRESH WATER / (12.48 gal/sx, 2.26 yield) + 1,435 SX TAIL @ 14.3 ppg (CLS G 50/50 POZ + 10% SALT + .05 libs/sx STATIC FREE + .2% R3 + .002 GPS FP-6L + 2% BENTONITE + 58.6% FW / (5.91 gal/sx, 1.31 yield) / DROP TOP PLUG & DISPLACE W/ 174 BBLS H2O + ADDITIVES / PLUG DOWN @ 04:46 HOURS / FLOATS HELD W/ 2 BBLS H2O RETURNED TO INVENTORY/ GOOD CIRC THROUGH OUT WITH 24 BBLS LEAD CMT TO SURFACE / LIFT PRESSURE @3,070 PSI / BUMP PRESSURE TO 3,602 PSI / TOP OF TAIL CEMENT CALCULATED @ 4,480 /			
	5:00 - 7:	00 2.00	CSGPRO	14	Α	P		RIG DOWN CMT EQUIP' FLUSH OUT AND PICK UP BOP STACK SET CASING SLIPS WITH 105,000, CUT OFF AND LAY DOWN LANDING JOINT			

6/29/2012 2:57:46PM

#### **US ROCKIES REGION Operation Summary Report** Well: NBU 921-21A3DS GREEN Spud Date: 1/11/2012 Project: UTAH-UINTAH Site: NBU 921-21A PAD Rig Name No: PROPETRO 11/11, H&P 298/298 Event: DRILLING End Date: 3/16/2012 Start Date: 11/10/2011 Active Datum: RKB @4,855.00usft (above Mean Sea UWI: NE/NE/0/9/S/21/E/21/0/0/26/PM/N/1025/E/0/815/0/0 Level) Date Phase Code P/U Time Duration Sub MD From Operation Start-End (hr) Code (usft) 7:00 - 12:00 5.00 CSGPRO Ρ 14 NIPPLE DOWN BOP, CLEAN PITS / RIG DOWN & LOAD OUT & RELEASE STRATA EQUIP, RIG

RELEASED TO NBU 1022-984CS @ 12:00 HRS

3/16/2012

6/29/2012 2:57:46PM

#### 1 General

#### 1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

#### 1.2 Well/Wellbore Information

Well	NBU 921-21A3DS GREEN	Wellbore No.	OH							
Well Name	NBU 921-21A3DS	Wellbore Name	NBU 921-21A3DS							
Report No.	1	Report Date	4/16/2012							
Project	UTAH-UINTAH	Site	NBU 921-21A PAD							
Rig Name/No.		Event	COMPLETION							
Start Date	5/15/2012	End Date	5/16/2012							
Spud Date	1/11/2012	Active Datum	RKB @4,855.00usft (above Mean Sea Level)							
UWI	NE/NE/0/9/S/21/E/21/0/0/26/PM/N/1025/E/0/815	NE/NE/0/9/S/21/E/21/0/0/26/PM/N/1025/E/0/815/0/0								

#### 1.3 General

Contractor	CASED HOLE SOLUTIONS	Job Method	PERFORATE	Supervisor	DAVE DANIELS
Perforated Assembly	PRODUCTION CASING	Conveyed Method	WIRELINE		

#### 1.4 Initial Conditions

#### 1.5 Summary

Fluid Type	KCL WATER	Fluid Density	Gross Interval	10,720.0 (usft)-11,104.0 (u	Start Date/Time	5/1/2012 12:00AM
Surface Press		Estimate Res Press	No. of Intervals	8	End Date/Time	5/1/2012 12:00AM
TVD Fluid Top		Fluid Head	Total Shots	72	Net Perforation Interval	20.00 (usft)
Hydrostatic Press		Press Difference	Avg Shot Density	3.60 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL				Final Press Date	

#### 2 Intervals

#### 2.1 Perforated Interval

Date	Formation/ CCL@ CCL- Reservoir (usft) S (usft)	MD Top (usft)	(usft)		Misfires/ Diamete Carr Type /Stage No Add. Shot r (in)	Carr Size (in)	Phasing C	harge Desc /Charge   Charge   Reason   Misrun Manufacturer   Weight   (gram)
5/1/2012 12:00AM	MESAVERDE/	10,720.0	10,724.0	4.00	0.360 EXP/	3.375	90.00	23.00 PRODUCTIO N

June 29, 2012 at 2:55 pm 1 OpenWells

#### 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc/Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
5/1/2012 12:00AM	MESAVERDE/			10,748.0	10,750.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	
5/1/2012 12:00AM	MESAVERDE/			10,784.0	10,786.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
5/1/2012 12:00AM	MESAVERDE/			10,809.0	10,810.0	3.00		0,360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
5/1/2012 12:00AM	MESAVERDE/			10,817.0	10,819.0	3,00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
5/1/2012 12:00AM	MESAVERDE/			10,873,0	10,876.0	3,00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
5/1/2012 12:00AM	MESAVERDE/			11,022.0	11,025.0	4.00		0.360	EXP/	3.375	90,00		23.00	PRODUCTIO N	
5/1/2012 12:00AM	MESAVERDE/			11,101.0	11,104.0	4.00		0.360	EXP/	3.375	90,00		23.00	PRODUCTIO N	

### 3 Plots

#### 3.1 Wellbore Schematic



#### **Operation Summary Report**

Well: NBU 921-	21A3DS (	GREEN		s, Williams	145 Pet 150	5-407(14/24/2011)	Soud Date	: 1/11/2012			
Project: UTAH-U		er - 1 manual T		Site: NRI	J 921-21A	PAD	Opud Date	Rig Name No: SWABBCO 6/6, SWABBCO 6/6			
Event: COMPLE		· · · · · · · · · · · · · · · · · · ·			·····			End Date: 5/16/2012			
Active Datum: F		55 DOUGH (al	ovo Moon S		e: 5/15/20		 S/21/E/21/0/0/26/PM/N				
Level)	(14D @4,0	oo.oousit (at	ove Mean S	<del>,</del>			0/21/22 I/ 0/0/20/1 1991	4 1020/E10/01010			
Date	C1 970 C 60	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U MD From	m Operation			
1/11/2012		-	The second second			11.154.45 15 3 4					
1/12/2012		-									
1/13/2012		-									
4/24/2012	12:30	- 14:00	1.50	COMP	33		Р	FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 19 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 37 PSI. 1ST PSI TEST T/ 9000 PSI. HELD FOR 30 MIN LOST			
								88 PSI.			
								NO COMMUNICATION OR MIGRATION WITH SURFACE CSG			
								BLEED OFF PSI. MOVE T/ NEXT WELL. SWIFW			
4/27/2012	7:00	- 11:00	4.00		37		Р	PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. SWIFW			
4/30/2012	6:00	- 17:00	11.00	FRAC	36	E	P	6AM . [DAY 3] MIRU SUPERIOR & CHS. HLD SUPERIOR JSA.			
								P.T. SURFACE LINES TO 9446#. LOST 368# IN 15 MINUTES. MECHANICAL POP OFF SET @ 8850#. NITROGEN POP OFF SET @ 8900#. KICK OUT ON PUMPS SET.8800-8750#.			
								[STG#1] PERF & FRAC AS PER DESIGN.			
								[STG#2] PERF & FRAC AS PER DESIGN.			
								[STG#3] PERF & FRAC AS PER DESIGN.			
								SDFN PREP TO SET KILL PLUG IN AM.			
5/1/2012	7:00	-		FRAC	36	E	Р	7AM [DAY 4] HLD SUPERIOR JSA			
								TOTAL 30/50 TLC SAND PUMPED ON GREEN WELL 921-21A3DS=183,536# AND TOTAL FLUID PUMPED IN 921-21A3DS=7829 BBLS.			
								[KILL PLUG] SET KILL PLUG @ 10,670'. GRAND TOTAL 30/50 TLC SAND FOR 4 WELLS ON PAD=736,439#, TOTAL FLUID FOR 4 WELL PAD=31,275 BBLS.			
5/15/2012	7:00	- 7:15	0.25	COMP	48		P	RDMO CHS & SUPERIOR. JSA= ROADING EQUIP			
0, 10,2012		- 18:00	10.75	COMP	30		P	RD RIG ON BON 1023-1F MOVE RIG & EQUIP TO			
		. 5.50	. 2 3	- 4.00				NBU 921-21A SPOT RIG & EQUP MISSING ANCHOR WAIT ON BLUE STAKES RU RIG ND W/H NU BOPS RU FLOOR & TUBING EQUIP TALLY & PU TUBING TAG 1ST PLUG @ 10670' SIW SDFN			
5/16/2012	7:00	- 7:15	0.25	COMP	48		Р	JSA= DRILLING PLUGS			

6/29/2012 2:57:05PM

/ell: NBU 921-2	1A3DS GREEN						Spud Date: 1/1	/2012		
Project: UTAH-U	INTAH		Site: NBU	J 921-21A	PAD			Rig Name No: SWABBCO 6/6, SWABBCO 6/6		
vent: COMPLE	TION	<del></del>	Start Date	e: 5/15/20	)12	1		End Date; 5/16/2012		
ctive Datum: R evel)	KB @4,855,00usft (ab	ove Mean Se	a	UWI: NI	E/NE/0/9/	S/21/E/2	1/0/0/26/PM/N/102	25/E/0/815/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
	7:15 - 11:00	3.75	COMP	30		P		EOT @ 10647' RU DRILLING EQUIP EST CIRC TEST BOPS TO 3000# DRILL 1ST CBP		
								PLUG #1] DRILL THRU HALLI 8K CBP @ 10670' IN 7 MIN W/ 100# INCREASE		
								PLUG#2] CONTINUE TO RIH TAG SAND @ 10760' (10' FILL) C/O & DRILL THRU HALLI 10K CBP @ 10770' IN 10 MIN W/ 300# INCREASE		
								PLUG #3] CONTINUE TO RIH TAG SAND @ 10891' (15' FILL) C/O & DRILL THRU HALLI 10K CBP @ 10906' IN 6 MIN W/ 150# INCREASE		
								PBTD] CONTINUE TO RIH TAG SAND @ 11169' (40' FILL) C/O & DRILL TO PBTD @ 11209' CIRC CLEAN PUH LD 15 JNTS LAND TUBING ON HNGR W/ 338 JNTS EOT @ 10721.72' RD DRILLING EQUIP RD FLOOR & TUBING EQUIP ND BOPS NU WELLHEAD PUMP OFF BIT @ 3300 PSI SIW WAIT ON WEATHERFORD WH TO DEL COP F/ W/H NU &		
								TUBING DETAIL K.B		
								TOTAL FL PUMPED= 7829 BBLS RIG REC = 1800 BBLS LEFT TO REC= 6029 BBLS		
								TUB ON LOC= 384 JNTS USED= 338 JNTS RETURNED= 46 JNTS		
	12:00 - 12:30	0.50	COMP	50				WELL TURNED TO SALES @ 12:00 HR ON 5/16/2012, 3400 MDCFD, 1920 BWPD, FCP 4090#, FTP 3700#, 20/64".		
5/17/2012	7:00 ~			50				WELL IP'D ON 5/17/12 - 2593 MCFD, 0 BOPD, 480 BWPD, CP 1800#, FTP 1055#, CK 20/64, LP 155#, 24 HRS		

6/29/2012 2:57:05PM

Project: UTAH - UTM (feet), NAD27, Zone 12N UINTAH\_NBU 921-21A PAD Site: Well: NBU 921-21A3DS Wellbore: NBU 921-21A3DS Section: SHL: P NBU 921-21A3DS NBU 921-21A3DS Design: Latitude: 40.026074 Longitude: -109.549525 GL: 4829.01 KB: 26' rkb + 4829' gl @ 4855.01ft (h&p 298) WELL DETAILS: NBU 921-21A3DS Ground Level: Easting 2046487.29 4829.01 Latittude +N/-S 0.00 Northing 14538844.90 40.026074 0.00 Name TVD drillers target (NBU 921-21A3DS) 5000.00 intercept (NBU 921-21A3DS) NBU 921-21A3DS (25ft cylinder) NBU 921-21A3DS BHL. (100ft cylinder) 5569.00 10181.00

#### FORMATION TOP DETAILS Formation Top Wasatch: top of cylinder Top Mesaverde: TVDPath 4969.00 5569.00 MDPath 4976.69 5576.69 7944.00 8899.00 9406.00 7951.71 8906.72 9413.72 MVU21: MVI 1 10181.00 10256.00 10188.72 10263.72 Top Sego: Castlegate 10620.00 10627.73 Blackhawk

**CASING DETAILS** TVD 2711.47 MD 2719.01

2046635.03



-109.549007 Circle (Radius: 100.00)

Magnetic Field Strength: 52579.5snT Dip Angle: 65.94" Date: 4/20/2009 Model: IGRF200510

					model: IGRE 2005 TO
DESIGN TA	RGET DETAILS				
+E/-W	Northing	Easting	Latitude	Longitude	Shape
135.04	14538699.95	2046624.70	40.025670	-109.549043	Circle (Radius: 15.00)
136.13	14538697.61	2046625.83	40.025663	-109.549039	Point
145.04	14538680.12	2046635.03	40.025615	-109.549007	Circle (Radius: 25.00)

40.025615

			SECT	ION DETAILS	5			
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
2725.01	0.31	92.21	2717.47	-123.93	125.53	0.00	0.00	175.87
2825.01	0.31	92.21	2817.46	-123.95	126.07	0.00	0.00	176.24
2859.70	0.66	159.08	2852.15	-124.14	126.23	1.75	94.88	176.49
5007.69	0.66	159.08	5000.00	-147.17	135.04	0.00	0.00	199.66
5160.62	0.20	153.20	5152.93	-148.23	135.47	0.30	-177.44	200.74
11227.73	0.20	153.20	11220.00	-167.17	145.04	0.00	0.00	221.32

14538680.12

145.04

Longitude -109.549525

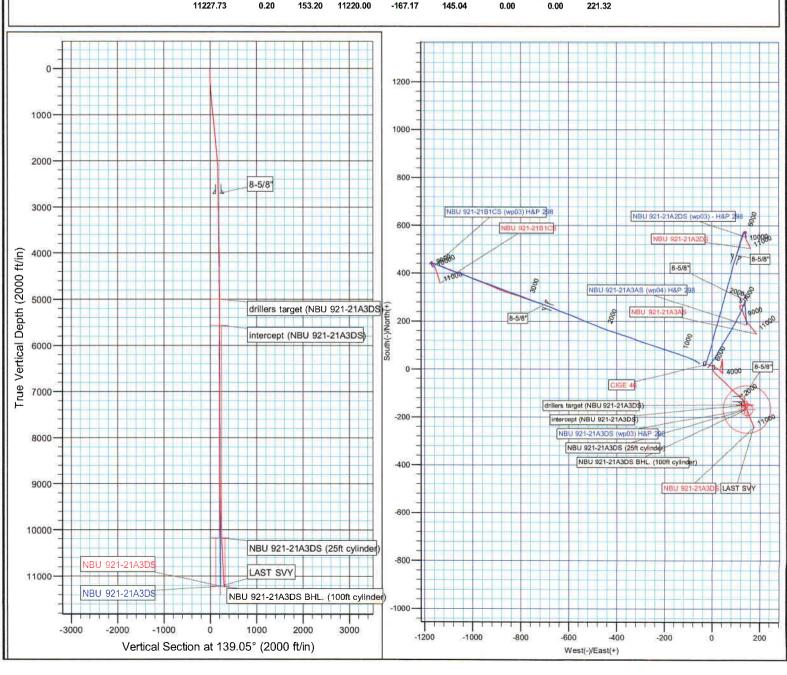
+N/-S

-147.17

-149.53 -167.17

-167,17

11220.00



Survey Report

Company: US ROCKIES REGION PLANNING

Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: UINTAH\_NBU 921-21A PAD

 Well:
 NBU 921-21A3DS

 Wellbore:
 NBU 921-21A3DS

 Design:
 NBU 921-21A3DS

Local Co-ordinate Reference: Well NBU 921-21A3DS

 TVD Reference:
 26' rkb + 4829' gl @ 4855.01ft (h&p 298)

 MD Reference:
 26' rkb + 4829' gl @ 4855.01ft (h&p 298)

North Reference: True

Survey Calculation Method: Minimum Curvature

Database: edmp

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Universal Transverse Mercator (US Survey Feet)

 Geo Datum:
 NAD 1927 (NADCON CONUS)

 Map Zone:
 Zone 12N (114 W to 108 W)

System Datum: Mean Sea Leve

UINTAH NBU 921-21A PAD Site Northing: 14,538,868.41 usft Site Position: Latitude: 40.026141 Lat/Long Easting: 2,046,432.01 usft Longitude: -109.549721 From: Position Uncertainty: 0.00 ft Slot Radius: 13-3/16 " **Grid Convergence:** 0.93 °

Well NBU 921-21A3DS Well Position +N/-S 0.00 ft Northing: 14.538.844.91 usft Latitude: 40.026074 +E/-W 0.00 ft Easting: 2,046,487.28 usft Longitude: -109.549525 **Position Uncertainty** 0.00 ft Wellhead Elevation: **Ground Level:** 4,829.01 ft ft

 Wellbore
 NBU 921-21A3DS

 Magnetics
 Model Name
 Sample Date
 Declination
 Dip Angle
 Field Strength

 (°)
 (°)
 (nT)

 IGRF200510
 4/20/2009
 11.36
 65.94
 52,580

Design NBU 921-21A3DS **Audit Notes:** ACTUAL Version: 1.0 Phase: Tie On Depth: 22.01 Depth From (TVD) **Vertical Section:** +N/-S +E/-W Direction (ft) (ft) (°) 0.00 22.01 0.00 139.05

3/14/2012 **Survey Program** Date From To (ft) Survey (Wellbore) **Tool Name** Description MWD - STANDARD 192 01 2,725.01 Survey #1 (NBU 921-21A3DS) MWA 2.844.00 11,240.00 Survey #2 (NBU 921-21A3DS) MWD MWD - STANDARD

Survey Measured Vertical Vertical Dogleg Build Turn Depth Section Depth Rate Rate Inclination Azimuth +N/-S +E/-W Rate (ft) (°/100usft) (°/100usft) (°/100usft) (ft) (ft) (ft) (ft) (°) 22.01 0.00 0.00 22.01 0.00 0.00 0.00 0.00 0.00 0.00 192.01 0.88 161.05 192.00 -1.23 0.42 1.21 0.52 0.52 0.00 137 63 276.97 -3 07 -27 55 277.01 2 23 1 75 3 47 1.72 1.59 362.01 3.50 141.64 361.86 -6.33 4.48 7.71 1.51 1.49 4.72 13.75 452.01 4 19 139.21 451.66 -10.978.33 0.79 0.77 -2 70 542.01 4.56 139.71 541.40 -16 19 12.79 20.61 0.41 0.41 0.56 632 01 133 71 631 10 -21.46 17.76 27 85 0.56 0.14 -6.67 4 69 135.58 720.77 -26.95 23.30 35.63 0.65 0.62 2.08 722.01 5.25 812.01 5.00 134.08 810.41 -32.62 29.00 43.64 0.32 -0.28 -1.67 902.01 5.50 135.58 900.03 -38.43 34.84 51.86 0.58 0.56 1.67

Survey Report

Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH\_NBU 921-21A PAD

Well:

NBU 921-21A3DS

Wellbore:

NBU 921-21A3DS

Design:

NBU 921-21A3DS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well NBU 921-21A3DS

26' rkb + 4829' gl @ 4855.01ft (h&p 298)

26' rkb + 4829' gl @ 4855.01ft (h&p 298)

True

Minimum Curvature

edmp

»y									
Measured Depth (ft)	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
(11)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(Tiannain)	(7100usit)	( /redusit)
992.01	6.00	131.71	989.58	-44.64	41.37	60.83	0.70	0.56	-4.30
1,082.01	5.50	130.58	1,079.12	-50.57	48.16	69.76	0.57	-0.56	-1.26
1,172.01	5.81	133.08	1,168.68	-56.49	54.76	78.55	0.44	0.34	2.78
1,262.01	5.63	131.83	1,258.24	-62.54	61.38	87.46	0.24	-0.20	-1.39
1,352.01	5.56	137.96	1,347.81	-68.73	67.59	96.20	0.67	-0.08	6.81
1,442.01	5.69	138.46	1,437.37	-75.30	73.46	105.02	0.15	0.14	0.56
1,532.01	5.94	137.71	1,526.91	-82.09	79.56	114.14	0.29	0.28	-0.83
1,622.01	5.69	135.46	1,616.45	-88,71	85.82	123.25	0.38	-0.28	-2.50
1,712.01	4.81	128.96	1,706.07	-94.27	91.88	131.42	1.18	-0.98	-7.22
1,802.01	5.06	124.46	1,795.74	-98.88	98.09	138.97	0.51	0.28	-5.00
1,892.01	6.19	125.33	1,885.30	-103.94	105.32	147.53	1.26	1.26	0.97
1,982.01	4.25	142.21	1,974.93	-109.38	111.32	155.57	2.73	-2.16	18.76
2,072.01	3.81	148.83	2,064.71	-114.57	114.92	161.85	0.71	-0.49	7.36
2,162.01	2.50	136.08	2,154.57	-118.54	117.83	166.76	1.64	-1.46	-14.17
2,210.33	1.82	132.64	2,202.85	-119.82	119.12	168.57	1.43	-1.40	-7.11
•	TARGET (921-21)		•					•	
2,252.01	1.25	126.71	2,244.52	-120.55	119.97	169.68	1.43	-1.38	-14.24
2,342.01	0.88	130.21	2,334.51	-121.58	121.29	171.32	0.42	-0.41	3.89
2,432.01	1.00	134.21	2,424.49	-122.57	122.38	172.78	0.15	0.13	4.44
2,522.01	1.19	119.83	2,514.48	-123.58	123.75	174.45	0.37	0.21	-15.98
2,612.01	0.38	78.71	2,604.47	-123.99	124.86	175.48	1.04	-0.90	-45.69
2,725.01	0.31	92.21	2,717.47	-123.93	125.53	175.87	0.09	-0.06	11.95
2,844.00	0.18	75.66	2,836.46	-123.90	126.03	176.18	0.12	-0.11	-13.91
2,939.00	0.27	91.70	2,931.45	-123.87	126.40	176.40	0.11	0.09	16.88
3,033.00	0.44	119.19	3,025.45	-124.05	126.94	176.89	0.25	0.18	29.24
3,128.00	0.56	137.31	3,120.45	-124.57	127.57	177.69	0.21	0.13	19.07
3,222.00	0.81	142.81	3,214.44	-125.43	128.28	178.81	0.27	0.27	5.85
3,316.00	1.19	149.31	3,308.43	-126.80	129.18	180.44	0.42	0.40	6.91
3,410.00	1.19	149.44	3,402.41	-128.48	130.18	182.36	0.00	0.00	0.14
3,504.00	1.31	149.56	3,496.39	-130.25	131.22	184.38	0.13	0.13	0.13
3,599.00	1.56	152.69	3,591.36	-132.33	132.36	186.70	0.28	0.26	3.29
3,693.00	1.75	153.69	3,685.32	-134.76	133.58	189.33	0.20	0.20	1.06
3,788.00	1.81	160.69	3,780.27	-137.47	134.72	192.13	0.24	0.06	7.37
3,882.00	2.00	160.19	3,874.22	-140.42	135.77	195.04	0.20	0.20	-0.53
3,977.00	2.06	157.69	3,969.16	-143.56	136.98	198.20	0.11	0.06	-2.63
4,071.00	1.63	190.19	4,063.11	-146.44	137.39	200.64	1.18	-0.46	34.57
4,166.00	2.00	234.94	4,158.07	-148.72	135.79	201.32	1.50	0.39	47.11
4,260.00	1.88	262.19	4,252.02	-149.87	132.92	200.31	0.98	-0.13	28.99
4,354.00	0.44	326.81	4,346.00	-149.78	131.19	199.11	1.85	-1.53	68.74
4,449.00	0.06	90.19	4,441.00	-149.47	131.04	198.78	0.50	-0.40	129.87
4,544.00	0.63	161.69	4,536.00	-149.97	131.26	199.30	0.65	0.60	75.26
4,638.00	0.94	171.44	4,629.99	-151.22	131.53	200.42	0.36	0.33	10.37
4,733.00	0.69	73.69	4,724.98	-151.83	132.20	201.32	1.30	-0.26	-102.89

Survey Report

Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH\_NBU 921-21A PAD

Well:

NBU 921-21A3DS

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Well NBU 921-21A3DS

26' rkb + 4829' gl @ 4855.01ft (h&p 298)

26' rkb + 4829' gl @ 4855.01ft (h&p 298)

True

Wellbore: NBU 921-21A3DS	Survey Calculation Method: Minimum Curvature
Design: NBU 921-21A3DS	Database: edmp
Survey	

Measured Depth (ft) 4,827.00	Inclination		Vertical			Vertical	Dogleg	Build	Turn
(ft)		Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
4,827.00	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100usft)	(°/100usft)	(°/100usft)
	1.06	47.56	4,818.97	-151.09	133.38	201.53	0.57	0.39	-27.80
4,922.00	0.81	64.81	4,913.96	-150.21	134.64	201.69	0.39	-0.26	18.16
5,008.05	0.80	93.05	5,000.00	-149.98	135.79	202.28	0.46	-0.01	32.82
drillers targe	et (NBU 921-21A	3DS)							
5,016.00	0.81	95.56	5,007.95	-149.99	135.90	202.36	0.46	0.11	31.52
5,111.00	0.81	108.06	5,102.94	-150.26	137.21	203.42	0.19	0.00	13.16
5,205.00	0.50	309.81	5,196.94	-150.21	137.53	203.58	1.37	-0.33	-168.35
5,299.00	0.44	293.44	5,290.93	-149.80	136.88	202.85	0.16	-0.06	-17.41
5,394.00	0.31	266.44	5,385.93	-149.67	136.29	202.37	0.23	-0.14	-28.42
5,488.00	0.31	207.69	5,479.93	-149.91	135.92	202.31	0.32	0.00	-62.50
5,577.07	0.43	197.90	5,568.99	-150.44	135.70	202.57	0.15	0.14	-10.99
•	BU 921-21A3DS)		0,000.00	100.71	100.70	202.01	0.10	0.11	10.00
5,583.00	0.44	197.44	5,574.93	-150.49	135.69	202.59	0.15	0.14	-7.71
5,677.00	1.25	280.31	5,668.92	-150.65	134.57	201.98	1.35	0.86	88.16
5,772.00	1.13	265.06	5,763.90	-150.54	132.62	200.62	0.36	-0.13	-16.05
5,866.00	1.00	258.31	5,857.88	-150.79	130.89	199.68	0.19	-0.14	-7.18
5,961.00	1.44	285.56	5,952.86	-150.64	128.93	198.27	0.75	0.46	28.68
6,055.00	1.69	353.94	6,046.83	-148.94	127.65	196.15	1.88	0.27	72.74
6,150.00	0.00	144.94	6,141.82	-147.55	127.50	195.00	1.78	-1.78	0.00
6,244.00	0.36	180.28	6,235.82	-147.84	127.50	195.23	0.38	0.38	0.00
6,338.00	0.44	164.31	6,329.82	-148.49	127.59	195.77	0.15	0.09	-16.99
6,433.00	0.56	172.31	6,424.81	-149.30	127.75	196.49	0.15	0.13	8.42
6,527.00	0.94	169,19	6,518.81	-150.51	127.96	197.54	0.41	0.40	-3.32
6,622.00	0.63	106.69	6,613.80	-151.43	128.61	198.66	0.90	-0.33	-65.79
6,716.00	0.88	134.44	6,707.79	-152.08	129.62	199.81	0.46	0.27	29.52
6,810.00	1.00	150.81	6,801.78	-153.30	130.53	201.34	0.31	0.13	17.41
6,905.00	0.31	20.31	6,896.77	-153.78	131.03	202.02	1.29	-0.73	-137.37
6,999.00	0.31	40.94	6,990.77	-153.35	131.28	201.87	0.12	0.00	21.95
7,094.00	0.31	88.56	7,085.77	-153.15	131.71	201.99	0.26	0.00	50.13
7,188.00	0.50	130.44	7,179.77	-153.41	132.27	202.56	0.36	0.20	44.55
7,283.00	0.63	140.31	7,274.76	-154.08	132.92	203.49	0.17	0.14	10.39
7,203.00	0.75	338.56	7,368.76	-153.91	133.03	203.49	1.45	0.14	-172.07
7,472.00	0.56	336.31	7,463.75	-153.91	132.61	202.40	0.20	-0.20	-172.07
7,566.00	0.35	346.06	7,557.75	-152.28	132.38	202.40	0.20	-0.20	-2.37 10.37
7,661.00	0.13	254.69	7,652.75	-152.20	132.32	201.76	0.34	-0.33 -0.13	-96.18
7,755.00	0.13	82.94	7,746.75	1E0 19	100.00	204 50	0.00	0.00	400.74
				-152.13 151.75	132.23	201.56	0.28	0.00	-182.71
7,850.00	0.44	352.81	7,841.75	-151.75 454.26	132.29	201.32	0.48	0.33	-94.87
7,944.00	0.19	326.19	7,935.75	-151.26	132.16	200.86	0.30	-0.27	-28.32
7,974.26	0.13	334.68	7,966.01	-151.19	132.11	200.78	0.22	-0.21	28.05
8,039.00	(921-21A3DS) 0.06	65.19	8,030.75	-151.11	132.11	200.72	0.22	-0.10	139.81
·			•						
8,133.00	0.30	215.20	8,124.75	-151.29	132.02	200.79	0.38	0.26	159.59
8,227.00 8,322.00	0.38 0.69	148.19 166.44	8,218.75 8,313.74	-151.76 -152.58	132.04 132.34	201.16 201.98	0.41 0.37	0.09 0.33	-71.29

Survey Report

Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH\_NBU 921-21A PAD

Well:

NBU 921-21A3DS

Wellbore: Design: NBU 921-21A3DS NBU 921-21A3DS Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well NBU 921-21A3DS

26' rkb + 4829' gl @ 4855.01ft (h&p 298)

26' rkb + 4829' gl @ 4855.01ft (h&p 298)

IIue

Minimum Curvature

edmp

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth (ft)	inclination (°)	Azimuth (°)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Section (ft)	Rate (°/100usft)	Rate (°/100usft)	Rate (°/100usft)
Massic Color Action 100		Temples August Son			va siguna				
8,416.00	0.25	25.69	8,407.74	-152.95	132.56	202.40	0.95	-0.47	-149.73
8,511.00	0.38	77.44	8,502.74	-152.69	132.96	202.47	0.31	0.14	54.47
8,605.00	0.75	123.81	8,596.74	-152.97	133.77	203.21	0.60	0.39	49.33
8,700.00	0.94	107.56	8,691.73	-153.55	135.03	204.47	0.32	0.20	-17.11
8,794.00	1.13	123.44	8,785.71	-154.29	136.54	206.02	0.36	0.20	16.89
8,889.00	1.19	133.44	8,880.69	-155.49	138.04	207.91	0.22	0.06	10.53
8,983.00	1.19	138.19	8,974.67	-156.89	139.40	209.86	0.10	0.00	5.05
9,077.00	1.31	154.94	9,068.65	-158.59	140.51	211.86	0.41	0.13	17.82
9,172.00	1.06	154.94	9,163.63	-160.37	141.34	213.75	0.26	-0.26	0.00
9,266.00	1.19	157.69	9,257.61	-162.06	142.08	215.52	0.15	0.14	2.93
9,361.00	1.56	149.31	9,352.58	-164.08	143.11	217.72	0.44	0.39	-8.82
9,455.00	1.81	150.81	9,446.54	-166.48	144.49	220.44	0.27	0.27	1.60
9,553.00	2.00	154.31	9,544.49	-169.37	145.98	223.60	0.23	0.19	3.57
9,647.00	2.63	156.81	9,638.41	-172.83	147.54	227.24	0.68	0.67	2.66
9,742.00	2.25	167.94	9,733.33	-176.66	148.79	230.95	0.64	-0.40	11.72
9,836.00	2.06	169.69	9,827.26	-180.12	149.48	234.01	0.21	-0.20	1.86
9,931.00	2.13	159.44	9,922.20	-183.46	150.41	237.14	0.40	0.07	
9,931.00	2.13	155,44	9,922.20	-103.40	150.41	237.14	0.40	0.07	-10.79
10,025.00	2.25	164.19	10,016.13	-186.87	151.52	240.45	0.23	0.13	5.05
10,120.00	2.44	163.06	10,111.05	-190.60	152.62	243.98	0.21	0.20	-1.19
10,188.78	2.62	159.97	10,179.76	-193.48	153.59	246.79	0.33	0.26	-4.50
	3DS (25ft cylind	•							
10,203.74	2.66	159.35	10,194.71	-194.12	153.83	247.43	0.33	0.27	-4.12
PBHL_NBU 9	21-21A3DS								
10,214.00	2.69	158.94	10,204.95	-194.57	154.00	247.88	0.33	0.27	-4.01
10,308.00	2.75	155.06	10,298.85	-198.67	155.74	252.13	0.21	0.06	-4.13
10,403.00	2.75	155.69	10,393.74	-202.82	157.64	256.50	0.03	0.00	0.66
10,498.00	2.81	161.19	10,488.63	-207.10	159.33	260.84	0.29	0.06	5.79
10,592.00	2.75	156.19	10,582.52	-211.34	160.98	265.13	0.27	-0.06	-5.32
10,687.00	2.94	155.19	10,677.40	-215.64	162.92	269.65	0.21	0.20	-1.05
10,781.00	3.00	156.56	10,771.27	-220.08	164.91	274.31	0.10	0.06	1.46
10,875.00	2.75	159.56	10,865.15	-224.45	166.68	278.77	0.31	-0.27	3.19
10,970.00	3.00	155.81	10,960.03	-228.86	168.49	283.28	0.33	0.26	-3.95
11,064.00	3.06	154.44	11,053.90	-233.36	170.58	288.06	0.10	0.06	-1.46
11,159.00	3.38	156.69	11,148.75	-238.22	172.79	293.17	0.36	0.34	2.37
11,180.00	3.31	156.72	11,169.72	-239.35	173.27	294.34	0.33	-0.33	0.14
•	3.31	150.72	11,109.72	-238.33	113.21	284.34	0.33	-0.33	U. 14
LAST SVY	0.04	150.70	44 045 07	244 77	474.04	200.05	2.22	2.00	
11,225.73	3.31	156.72	11,215.37	-241.77	174.31	296.85	0.00	0.00	0.00
NBU 921-21A 11,240.00	3.31 3.31	t cylinder) 156.72	11,229.62	-242.53	174.64	297.64	0.00	0.00	

Survey Report

Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH\_NBU 921-21A PAD

Well:

NBU 921-21A3DS

Wellbore:

NBU 921-21A3DS

Design:

NBU 921-21A3DS

Local Co-ordinate Reference:

Well NBU 921-21A3DS

TVD Reference:

MD Reference:

26' rkb + 4829' gl @ 4855.01ft (h&p 298)

26' rkb + 4829' gl @ 4855.01ft (h&p 298) True

North Reference:

**Survey Calculation Method:** 

Minimum Curvature

Database:

edmp

Depth Depth +N/-S +E/-W (ft) (ft) (ft) (ft) Comment 11,180.00 11,169.72 -239.35 173.27 LAST SVY	
Depth Depth +N/-S +E/-W	
Measured Vertical Local Coordinates	

Checked By:	Approved By:	Date:

# **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N UINTAH\_NBU 921-21A PAD NBU 921-21A3DS

**NBU 921-21A3DS** 

Design: NBU 921-21A3DS

**Survey Report - Geographic** 

19 March, 2012

Survey Report - Geographic

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: UINTAH\_NBU 921-21A PAD

 Well:
 NBU 921-21A3DS

 Wellbore:
 NBU 921-21A3DS

 Design:
 NBU 921-21A3DS

Local Co-ordinate Reference: Well NBU 921-21A3DS

TVD Reference: 26' rkb + 4829' gl @ 4855.01ft (h&p 298)
MD Reference: 26' rkb + 4829' gl @ 4855.01ft (h&p 298)

North Reference: True

Survey Calculation Method: Minimum Curvature

Database: edmp

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Universal Transverse Mercator (US Survey Feet)

Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: Zone 12N (114 W to 108 W)

System Datum: Mean Sea Level

UINTAH\_NBU 921-21A PAD Site Northing: 14,538,868.41 usft Site Position: Latitude: 40.026141 -109.549721 Lat/Long Easting: 2,046,432.01 usft Longitude: From: **Position Uncertainty:** 0.00 ft Slot Radius: 13-3/16 " Grid Convergence: 0.93 °

Well NBU 921-21A3DS 40.026074 Well Position +N/-S 0.00 ft Northing: 14,538,844.91 usft Latitude: +E/-W 0.00 ft 2,046,487.28 usft -109.549525 Easting: Longitude: Position Uncertainty 0.00 ft Wellhead Elevation: Ground Level: 4,829.01 ft

Wellbore NBU 921-21A3DS Model Name Sample Date Declination Dip Angle Field Strength Magnetics **(°**) (°) (nT) IGRF200510 4/20/2009 65.94 52,580 11.36

NBU 921-21A3DS Design Audit Notes: ACTUAL Tie On Depth: Version: 1.0 Phase: 22.01 +E/-W Depth From (TVD) +N/-S Direction **Vertical Section:** (ft) (°) (ft) 22.01 0.00 0.00 139.05

**Survey Program** 3/14/2012 Date From To (ft) Tool Name Survey (Wellbore) Description 2,725.01 Survey #1 (NBU 921-21A3DS) MWD MWD - STANDARD 192.01 11,240.00 Survey #2 (NBU 921-21A3DS) MWD MWD - STANDARD 2,844.00

rvey										
Measured Depth (ft)	inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
22.01	0.00	0.00	22.01	0.00	0.00	14,538,844.91	2,046,487.28	40.026074	-109.549525	
192.01	0.88	161.05	192.00	-1.23	0.42	14,538,843.68	2,046,487.72	40.026071	-109.549524	
277.01	2.23	137.63	276.97	-3.07	1.75	14,538,841.86	2,046,489.08	40.026066	-109.549519	
362.01	3.50	141.64	361.86	-6.33	4.48	14,538,838.65	2,046,491.86	40.026057	-109.549509	
452.01	4.19	139.21	451.66	-10.97	8.33	14,538,834.07	2,046,495.79	40.026044	-109.549496	
542.01	4.56	139.71	541.40	-16.19	12.79	14,538,828.92	2,046,500.33	40.026030	-109.549480	
632.01	4.69	133.71	631.10	-21.46	17.76	14,538,823.73	2,046,505.39	40.026015	-109.549462	
722.01	5.25	135.58	720.77	-26.95	23.30	14,538,818.34	2,046,511.02	40.026000	-109.54944	
812.01	5.00	134.08	810.41	-32.62	29.00	14,538,812.77	2,046,516.81	40.025985	-109.54942	
902.01	5.50	135.58	900.03	-38.43	34.84	14,538,807.05	2,046,522.74	40.025969	-109,54940	
992.01	6.00	131.71	989.58	-44.64	41.37	14,538,800.95	2,046,529.37	40.025952	-109.549378	

Survey Report - Geographic

Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH\_NBU 921-21A PAD

Well: Wellbore: NBU 921-21A3DS NBU 921-21A3DS NBU 921-21A3DS Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 921-21A3DS

26' rkb + 4829' gl @ 4855.01ft (h&p 298) 26' rkb + 4829' gl @ 4855.01ft (h&p 298)

True

Minimum Curvature

98681977 (SV	975. Y 827 (1893)			Services statements.	Nephronisa na 1968 akasas		Maria Talan Kabupatèn dan kabupatèn banas Pada kabupatèn bahan bahan bahasa bahasa bahasa	Constraint Administration of Constraint	Control of the Contro
өу									
/leasured			Vertical			Map	Map		
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting		
(ft)	(°)	<b>(°)</b>	(ft)	<b>(ft)</b>	(ft)	(usft)	(usft)	Latitude	Longitude
1,082.01	5.50	130.58	1,079.12	-50.57	48.16	14,538,795.13	2,046,536.26	40.025935	-109.549
1,172.01	5.81	133.08	1,168.68	-56.49	54.76	14,538,789.32	2,046,542.95	40.025919	-109.549
1,262.01	5.63	131.83	1,258.24	-62.54	61.38	14,538,783.37	2,046,549.67	40.025902	-109.549
1,352.01	5.56	137.96	1,347.81	-68.73	67.59	14,538,777.29	2,046,555.98	40.025885	-109.549
1,442.01	5.69	138.46	1,437.37	-75.30	73.46	14,538,770.81	2,046,561.96	40.025867	-109.549
1,532.01	5.94	137.71	1,526.91	-82.09	79.56	14,538,764.12	2,046,568.16	40.025849	-109.549
1,622.01	5.69	135.46	1,616.45	-88.71	85.82	14,538,757.60	2,046,574.53	40.025831	-109.549
1,712.01	4.81	128.96	1,706.07	-94.27	91.88	14,538,752.15	2,046,580.69	40.025815	-109.549
1,802.01	5.06	124.46	1,795.74	-98.88	98.09	14,538,747.63	2,046,586.97	40.025803	-109.549
1,892.01	6.19	125.33	1,885.30	-103.94	105.32	14,538,742.70	2,046,594.28	40.025789	-109.549
1,982.01	4.25	142.21	1,974.93	-109.38	111.32	14,538,737.36	2,046,600.37	40.025774	-109.549
2,072.01	3.81	148.83	2,064.71	-114.57	114.92	14,538,732.22	2,046,604.05	40.025760	-109.549
2,162.01	2.50	136.08	2,154.57	-118.54	117.83	14,538,728.30	2,046,607.02	40.025749	-109.549
2,210.33		132.64	2,202.85	-119.82	119.12	14,538,727.04	2,046,608.34	40.025745	-109.549
	RS TARGET (9	•							
2,252.01	1.25	126.71	2,244.52	-120.55	119.97	14,538,726.33	2,046,609.20	40.025743	-109.549
2,342.01		130.21	2,334.51	-121.58	121.29	14,538,725.32	2,046,610.53	40.025740	-109.549
2,432.01		134.21	2,424.49	-122.57	122.38	14,538,724.34	2,046,611.64	40.025738	-109.549
2,522.01	1.19	119.83	2,514.48	-123.58	123.75	14,538,723.35	2,046,613.03	40.025735	-109.549
2,612.01		78.71	2,604.47	-123.99	124.86	14,538,722.96	2,046,614.14	40.025734	-109.549
2,725.01		92.21	2,717.47	-123.93	125.53	14,538,723.04	2,046,614.81	40.025734	-109.549
2,844.00		75.66	2,836.46	-123.90	126.03	14,538,723.08	2,046,615.31	40.025734	-109.549
2,939.00		91.70	2,931.45	-123.87	126.40	14,538,723.12	2,0 <del>4</del> 6,615.68	40.025734	-109.549
3,033.00		119.19	3,025.45	-124.05	126.94	14,538,722.94	2,046,616.22	40.025734	-109.549
3,128.00		137.31	3,120.45	-124.57	127.57	14,538,722.43	2,046,616.86	40.025732	-109.549
3,222.00		142.81	3,214.44	-125.43	128.28	14,538,721.58	2,046,617.59	40.025730	-109.549
3,316.00		149.31	3,308.43	~126.80	129.18	14,538,720.22	2,046,618.51	40.025726	-109.549
3,410.00		149.44	3,402.41	-128.48	130.18	14,538,718.56	2,046,619.53	40.025721	-109.549
3,504.00		149.56	3,496.39	-130.25	131.22	14,538,716.81	2,046,620.60	40.025716	-109.549
3,599.00		152.69	3,591.36	-132.33	132.36	14,538,714.74	2,046,621.78	40.025711	-109.549
3,693.00		153.69	3,685.32	-134.76	133.58	14,538,712.34	2,046,623.04	40.025704	-109.549
3,788.00		160.69	3,780.27	-137.47	134.72	14,538,709.64	2,046,624.23	40.025697	-109.549
3,882.00		160.19	3,874.22	-140.42	135.77	14,538,706.72	2,046,625.32	40.025689	-109.549
3,977.00		157.69	3,969.16	-143.56	136.98	14,538,703.60	2,046,626.58	40.025680	-109.549
4,071.00		190.19	4,063.11	-146.44	137.39	14,538,700.73	2,046,627.03	40.025672	-109.549
4,166.00		234.94	4,158.07	-148.72	135.79	14,538,698.42	2,046,625.47	40.025666	-109.549
4,260.00		262.19	4,252.02	-149.87	132.92	14,538,697.22	2,046,622.62	40.025663	-109.549
4,354.00		326.81	4,346.00	-149.78	131.19	14,538,697.28	2,046,620.90	40.025663	-109.549
4,449.00		90.19	4,441.00	-149.47	131.04	14,538,697.59	2,046,620.74	40.025664	-109.549
4,544.00		161.69	4,536.00	-149.97	131.26	14,538,697.09	2,046,620.96	40.025662	-109.549
4,638.00		171.44	4,629.99	-151.22	131.53	14,538,695.85	2,046,621.26	40.025659	-109.549
4,733.00		73.69	4,724.98	-151.83	132.20	14,538,695.25	2,046,621.94	40.025657	-109.549
4,827.00		47.56	4,818.97	-151.09 450.24	133.38	14,538,696.01	2,046,623.11	40.025659	-109.549
4,922.00		64.81	4,913.96	-150.21	134.64	14,538,696.91	2,046,624.35	40.025662	-109.549
5,008.05		93.05	5,000.00	-149.98	135.79	14,538,697.16	2,046,625.50	40.025662	-109.549
	target (NBU 92	•	F 007 05	4 40 00	405.00	44 500 007 15	0.040.005.01	40.00000	JAA F **
5,016.00		95.56	5,007.95	-149.99	135.90	14,538,697.15	2,046,625.61	40.025662	-109.54
5,111.00		108.06	5,102.94	-150.26	137.21	14,538,696.90	2,046,626.92	40.025662	-109.549
5,205.00		309.81	5,196.94	-150.21	137.53	14,538,696.96	2,046,627.23	40.025662	-109.54
5,299.00		293.44	5,290.93	-149.80	136.88	14,538,697.36	2,046,626.58	40.025663	-109.54
5,394.00		266.44	5,385.93	-149.67	136.29	14,538,697.47	2,046,625.99	40.025663	-109.549
5,488.00		207.69	5,479.93	-149.91	135.92	14,538,697.23	2,046,625.62	40.025662	-109.549
5,577.07		197.90	5,568.99	-150.44	135.70	14,538,696.69	2,046,625.41	40.025661	-109.549
intercep	t (NBU 921-21	A3DS)							

Survey Report - Geographic

Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH\_NBU 921-21A PAD

Well: Wellbore:

NBU 921-21A3DS NBU 921-21A3DS

Local Co-ordinate Reference:

Well NBU 921-21A3DS

TVD Reference: MD Reference:

Database:

26' rkb + 4829' gl @ 4855.01ft (h&p 298) 26' rkb + 4829' gl @ 4855.01ft (h&p 298)

North Reference:

Survey Calculation Method:

True Minimum Curvature

edmp

Design: NBU 921-21A3DS	
------------------------	--

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,677.00	1.25	280.31	5,668.92	-150.65	134.57	14,538,696.47	2,046,624.29	40.025660	-109.5490
5,772.00	1.13	265.06	5,763.90	-150.54	132.62	14,538,696.54	2,046,622.33	40.025661	-109.5490
5,866.00	1.00	258.31	5,857.88	-150.79	130.89	14,538,696.27	2,046,620.61	40.025660	-109.5490
5,961.00	1.44	285.56	5,952.86	-150.64	128.93	14,538,696.39	2,046,618.65	40.025660	-109.5490
6,055.00	1.69	353.94	6,046.83	-148.94	127.65	14,538,698.06	2,046,617.34	40.025665	-109.5490
6,150.00	0.00	144.94	6,141.82	-147.55	127.50	14,538,699.45	2,046,617.16	40.025669	-109.5490
6,244.00	0.36	180.28	6,235.82	-147.84	127.50	14,538,699.16	2,046,617.17	40.025668	-109.5490
6,338.00	0.44	164.31	6,329.82	-148.49	127.59	14,538,698.52	2,046,617.27	40.025666	-109.5490
6,433.00	0.56	172.31	6,424.81	-149.30	127.75	14,538,697.71	2,046,617.45	40.025664	-109.5490
6,527.00	0.94	169.19	6,518.81	-150.51	127.96	14,538,696.50	2,046,617.67	40.025661	-109.5490
6,622.00	0.63	106.69	6,613.80	-151.43	128.61	14,538,695.59	2,046,618.34	40.025658	-109.5490
6,716.00	0.88	134,44	6,707.79	-152.08	129.62	14,538,694.96	2,046,619.36	40.025657	-109.5490
6,810.00	1.00	150.81	6,801.78	-153.30	130.53	14,538,693.75	2,046,620.29	40.025653	-109.5490
6,905.00	0.31	20.31	6,896.77	-153.78	131.03	14,538,693.28	2,046,620.79	40.025652	-109.5490
6,999.00	0.31	40.94	6,990.77	-153.35	131.28	14,538,693.71	2,046,621.04	40.025653	-109.5490
7,094.00	0.31	88.56	7,085.77	-153.15	131.71	14,538,693.92	2,046,621.46	40.025654	-109.549
7,188.00	0.50	130.44	7,179.77	-153.41	132.27	14,538,693.67	2,046,622.03	40.025653	-109.549
7,283.00	0.63	140.31	7,274.76	-154.08	132.92	14,538,693.01	2,046,622.69	40.025651	-109.549
7,377.00	0.75	338.56	7,368.76	-153.91	133.03	14,538,693.18	2,046,622.80	40.025652	-109.549
7,472.00	0.56	336.31	7,463.75	-152.90	132.61	14,538,694.18	2,046,622.37	40.025654	-109.549
7,566.00		346.06	7,557.75	-152.28	132.38	14,538,694.80	2,046,622.12	40.025656	-109.549
7,661.00		254.69	7,652.75	-152,11	132.22	14,538,694.97	2,046,621.96	40.025656	-109.549
7,755.00	0.13	82.94	7,746.75	-152.13	132.23	14,538,694.95	2,046,621.97	40.025656	-109.549
7,850.00		352.81	7,841.75	-151.75	132.29	14,538,695.33	2,046,622.02	40.025657	-109.549
7,944.00		326.19	7,935.75	-151.26	132.16	14,538,695.81	2,046,621.88	40.025659	-109.549
7,974.26	0.13	334.68	7,966.01	-151.19	132.11	14,538,695.89	2,046,621.84	40.025659	-109.549
•			7,000.01	-101.10	102.11	14,000,000.00	2,040,021.04	-0.020000	-100.040
	EPT (921-21A) 0.06	נפטג) 65.19	9 020 75	151 11	122.11	44 529 605 06	0.046.604.64	40.025659	-109.549
8,039.00			8,030.75	-151.11	132.11	14,538,695.96	2,046,621.84		
8,133.00		215.20	8,124.75	-151.29 454.70	132.02	14,538,695.78	2,046,621.74	40.025659	-109.549
8,227.00		148.19	8,218.75	-151.76	132.04	14,538,695.32	2,046,621.77	40.025657	-109.549
8,322.00		166.44	8,313.74	-152.58	132.34	14,538,694.50	2,046,622.09	40.025655	-109.549
8,416.00		25.69	8,407.74	-152.95	132.56	14,538,694.14	2,046,622.32	40.025654	-109.549
8,511.00		77.44	8,502.74	-152.69	132.96	14,538,694.40	2,046,622.71	40.025655	-109.549
8,605.00		123.81	8,596.74	-152.97	133.77	14,538,694.14	2,046,623.53	40.025654	-109.549
8,700.00		107.56	8,691.73	-153.55	135.03	14,538,693.58	2,046,624.80	40.025653	-109.549
8,794.00		123.44	8,785.71	-154.29	136.54	14,538,692.86	2,046,626.32	40.025650	-109.549
8,889.00		133.44	8,880.69	-155.49	138.04	14,538,691.69	2,046,627.83	40.025647	-109.549
8,983.00		138.19	8,974.67	-156.89	139.40	14,538,690.31	2,046,629.22	40.025643	-109.549
9,077.00		154.94	9,068.65	-158.59	140.51	14,538,688.63	2,046,630.35	40.025639	-109.549
9,172.00		154.94	9,163.63	-160.37	141.34	14,538,686.86	2,046,631.21	40.025634	-109.549
9,266.00		157.69	9,257.61	-162.06	142.08	14,538,685.18	2,046,631.98	40.025629	-109.549
9,361.00	1.56	149.31	9,352.58	-164.08	143.11	14,538,683.18	2,046,633.04	40.025624	-109.549
9,455.00	1.81	150.81	9,446.54	-166.48	144.49	14,538,680.80	2,046,634.46	40.025617	-109.549
9,553.00	2.00	154.31	9,544.49	-169.37	145.98	14,538,677.94	2,046,636.00	40.025609	-109.549
9,647.00	2.63	156.81	9,638.41	-172.83	147.54	14,538,674.50	2,046,637.62	40.025600	-109.548
9,742.00	2.25	167.94	9,733.33	-176.66	148.79	14,538,670.70	2,046,638.93	40.025589	-109.548
9,836.00	2.06	169.69	9,827.26	-180.12	149.48	14,538,667.24	2,046,639.67	40.025580	-109.548
9,931.00	2.13	159.44	9,922.20	-183.46	150.41	14,538,663.92	2,046,640.65	40.025570	-109.548
10,025.00		164.19	10,016.13	-186.87	151.52	14,538,660.53	2,046,641.83	40.025561	-109.548
10,120.00		163.06	10,111.05	-190.60	152.62	14,538,656.82	2,046,642.98	40.025551	-109.548
10,188.78		159.97	10,179.76	-193.48	153.59	14,538,653.96	2,046,644.00	40.025543	-109.548
	1-21A3DS (25					,			
10,203.74	2.66	159.35	10,194.71	-194.12	153.83	14,538,653.32	2,046,644.25	40.025541	-109.548
_	IBU 921-21A3								
10,214.00	2.69	158.94	10,204.95	-194.57	154.00	14,538,652.87	2,046,644.42	40.025540	-109.548

Survey Report - Geographic

Company:

US ROCKIES REGION PLANNING

Project:

UTAH - UTM (feet), NAD27, Zone 12N

Site:

UINTAH\_NBU 921-21A PAD

Well: Wellbore:

Design:

NBU 921-21A3DS NBU 921-21A3DS

Database:

Local Co-ordinate Reference:

Well NBU 921-21A3DS

TVD Reference:

MD Reference:

North Reference: **Survey Calculation Method:**  26' rkb + 4829' gl @ 4855.01ft (h&p 298)

26' rkb + 4829' gl @ 4855.01ft (h&p 298)

True

Minimum Curvature

edmp

NBU 921-21A3DS

Survey Measured Vertical Map Map Depth Depth Northing Inclination +N/-S +E/-W Easting Azimuth (ft) (°) (ft) (usft) (usft) (°) (ft) (ft) Latitude Longitude 14,538,648.80 10,308.00 2.75 155.06 10,298.85 -198.67 155.74 2,046,646.23 -109 548969 40 025529 10,403.00 2.75 155.69 10,393.74 -202.82 157.64 14,538,644.68 2,046,648.20 40.025517 -109.548962 10,498.00 161.19 10,488.63 -207.10 2.81 159.33 14,538,640.43 2.046,649,96 40.025505 -109.548956 10,592.00 2.75 156.19 10,582.52 -211.34 160.98 14,538,636.21 2,046,651.68 40.025494 -109.548950 10,687.00 10,677.40 14,538,631.95 -109.548943 2 94 155.19 -215.64 162.92 2,046,653.69 40.025482 10,781.00 3.00 156.56 10,771.27 -220.08 164.91 14,538,627.54 2,046,655.76 40.025470 -109.548936 10,875.00 2.75 10,865.15 166.68 159.56 -224.4514,538,623.20 2,046,657.59 40.025458 -109.548930 10,970.00 10,960.03 3.00 155.81 -228.86 168.49 14,538,618.82 2,046,659.48 40.025446 -109.548924 11,064.00 3.06 154.44 11,053.90 -233.36 170.58 14,538,614.35 2,046,661.64 40.025433 -109.548916 11,159.00 3.38 156.69 11,148.75 -238.22 172.79 14,538,609.53 40.025420 2,046,663.92 -109 548908 11,180.00 3.31 156.72 11,169.72 -239.35 173.27 14,538,608.41 2,046,664.43 40.025417 -109.548906 **LAST SVY** 11,225.73 174.31 3.31 156.72 11,215,37 -241.77 14,538,606.00 2,046,665.51 40.025410 -109.548903 NBU 921-21A3DS BHL. (100ft cylinder) 11,240.00 11,229.62 -242.53 174.64 40.025408 3.31 156.72 14,538,605.25 2,046,665.85 -109.548902 PROJECTION - NBU 921-21A3DS BHL

Design Annotations  Measured  Depth  (ft)	Vertical Depth (ft)	Local Coord +N/-S (ft)	inates +E/-W (ft)	Comment
11,180.00	11,169.72	-239.35	173.27	LAST SVY
11,240.00	11,229.62	-242.53	174.64	PROJECTION

Checked By:	Approved By:	Data:	
Checked by.	Apploved by.	Date:	

Sundry Number: 30396 API Well Number: 43047506110000

	FORM 9			
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING				5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0576
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE			
	posals to drill new wells, significantly reenter plugged wells, or to drill horiz n for such proposals.			7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well				8. WELL NAME and NUMBER: NBU 921-21A3DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.			<b>9. API NUMBER:</b> 43047506110000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 8021		<b>NE NUMBER:</b> 9 720 929-6	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1025 FNL 0815 FEL				COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 11 Township: 09.0S Range: 21.0E Meri	idian: S	3	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NA	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		LTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	□ c	HANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	□ c	OMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ FI	RACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PI	LUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	□ R	ECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	☐ si	IDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	□ v	ENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	□ s	I TA STATUS EXTENSION	APD EXTENSION
10/2/2012	WILDCAT WELL DETERMINATION		TUED	OTHER:
			I I I I I I I I I I I I I I I I I I I	<u>'</u>
	completed operations. Clearly show eted, finishing well completi 11,240.			Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 02, 2012
NAME (DI EASE DDINT)	DUONE MUN	RED	TITI E	
			TITLE Regulatory Analyst II	
SIGNATURE N/A			<b>DATE</b> 10/2/2012	

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING  SUNDRY NOTICES AND REPORTS ON WELLS  Do not use this form for groposals to drill now works, significantly deepen oxising wells below.  UTUBYS  Do not use this form for groposals to drill now works, significantly deepen oxising wells below.  FOR PERMIT TO DRILL form for such proposals.  Jaw Well  Summer of operations.  KERR-RACCES OIL & GAS ONSHORE, L.P.  ANDESSO OF OPERATOR:  KERR-RACCES OIL & GAS ONSHORE, L.P.  ANDESSO OF OPERATOR:  AN		FORM 9						
DO NOT USE this form for proposals to drill new wells, significantly despen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION PROPERTIES TO DRILL form for such proposals.  1. TYPE OF WELL  3. APPLICATION OF WELL  3. APPLICATION OF WELL  3. APPLICATION OF WELL  4. SOUTH STATE AND EXPLORATION.  4. INCLUDING STATE  4. SOUTH STATE  4. SOUTH STATE  4. SOUTH STATE  4. SOUTH STATE  5. WELL NAME and NUMBER: NO. 15. 15. 15. 15. 15. 15. 15. 15. 15. 15								
CUTTON DOTRICE MANUAL PROPERTY IN AMERICAN PROPERTY								
Cast Well  2. NAME OF OPERATOR: KERR-MCCES CUI. & GAS ONSHORE, L.P.  3. ADDRESS OF OPERATOR: PO. Box 173779 1099 1881 Street, Suite 600, Denver, CO, 80217 3779  7. 20 92-9, FIELD and POOL or WILDCAT: POOTAGES AT SURFACE: 1025 FNL 0815 FEL 1025 FNL 0815 FEL 1025 FNL 0815 FEL 1027 FNL 0815 FEL 1028 FNL 0815 FNL 1028 F	current bottom-hole depth,	reenter plugged wells, or to drill horizont		l .				
ADDRESS OF OPERATOR:  PO. BOX 173779 1099 18th Street, Suite 600, Denver, CO. 80217 3779  3. ADDRESS OF OPERATOR: PO. BOX 173779 1099 18th Street, Suite 600, Denver, CO. 80217 3779  720 929-  4. LOCATION OF WELL FOOTAGES AT SURFACE: 1025 FNL 0815 FEL 1025 FNL 0815 FEL 1025 FNL 0815 FEL 1027 FNL 0815 FEL 1028 FNL 0815 FNL 081	1							
P.O. BOX 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779  T20 929-6 (INATEMAL BUTTES LOCATION OF WELL LOCATION OF WELL LOCATION OF WELL LOCATION OF WELL LOCATION OB 15 FEL CITIZET, SECTION, TOWNSHIP, RANGE, MERIDIAN: COUNTY: UINTAH  TYPE OF SUBMISSION  TYPE OF ACTION  CAMBRING REPORT  GRANGE TUBER OF ACTION  COUNTY: UINTAH  TYPE OF ACTION  TYPE OF ACTION  CAMBRING REPORT  GRANGE TUBER OF ACTION  COUNTY: UINTAH  TYPE OF ACTION  CAMBRING REPORT  GRANGE TUBER OF ACTION  COUNTY: UINTAH  TYPE OF ACTION  CAMBRING REPORT  GRANGE TUBER OF ACTION  COUNTY: UINTAH  TYPE OF ACTION  CAMBRING REPORT  GRANGE TUBER OF ACTION  COUNTY: UINTAH  TYPE OF ACTION  CAMBRING REPORT  GRANGE TUBER OF ACTION  COUNTY: UINTAH  TYPE OF ACTION  CAMBRING REPORT  GRANGE TUBER OF ACTION  COUNTY: UINTAH  TYPE OF ACTION  CAMBRING REPORT  GRANGE TUBER OF ACTION  COUNTY: UINTAH  TYPE OF ACTION  CAMBRING REPORT  GRANGE TUBER OF ACTION  COUNTY: UINTAH  TYPE OF ACTION  CAMBRING REPORT  GRANGE TUBER OF ACTION  COUNTY: UINTAH  TYPE OF ACTION  CAMBRING REPORT  GRANGE TUBER OF ACTION  COUNTY: UINTAH  TYPE OF ACTION  CAMBRING REPORT  GRANGE TUBER OF ACTION  COUNTY: UINTAH  TYPE OF ACTION  CAMBRING TUBER  TOWNSHIP  COUNTY: UINTAH  TYPE OF ACTION  COUNTY: UINTAH  TYPE OF ACTION  COUNTY: UINTAH  TOWNSHIP  COUNTY: UINTAH  COUNTY: UINTAH  COUNTY: UINTAH		NSHORE, L.P.		l .				
FOOTAGES AT SURFACE: 1025 FNL 0915 FEL OTROUTS, SECTION, TOWNSHIP, RANGE, MERIDIAN: OTHER TOWNSHIP, RANGE, MERIDIAN: OTHER SECTION, 21 TOWNSHIP, RANGE, MERIDIAN: OTHER DATA      TYPE OF SUBMISSION								
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA  TYPE OF SUBMISSION  TYPE OF ACTION     ACIDIZE	FOOTAGES AT SURFACE:			l .				
TYPE OF SUBMISSION  TYPE OF ACTION    ACIDIZE			an: S	-				
A NOTICE OF INTENT A NOTICE OF INTENT P (28/2015    CHANGE TO PREVIOUS PLANS		K APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA				
Appreximate server will start:  9/28/2015  GHANGE TO PREVIOUS PLANS  GHANGE TUBBNO  GHANGE WELL NAME  GHANGE WELL NAME  GHANGE WELL STATUS  PLUG AND ABANDON  PLUG AND ABANDON  PLUG BACK  RECOMPLETE DIFFERENT FORMATION  BERTIAGACT TO REPAIR WELL  TEMPORARY ABANDON  WATER SHUTOFF  WATER SHUTOFF  WATER SHUTOFF  WATER SHUTOFF  SITA STATUS EXTENSION  GHAPE  12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  KERR MCGEE OIL & GAS ONSHORE LP is requesting to do a recomplete  on the NBU 921-21A3DS. See the attached procedures for the  recomplete.  NAME (PLEASE PRINT)  Date:  SOBITION OF THE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Accepted by the  Utah Division of  Oil, Gas and Mining  Date:  Sobition of Sputh  Date:  SOBITION OF THE PROPOSED OR COMPLETE OF THE PROPOSED OR COMPLETE OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Accepted by the  Utah Division of  Oil, Gas and Mining  Date:  SOBITION OF THE PROPOSED OR COMPLETE OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Accepted by the  Utah Division of  Oil, Gas and Mining  Date:  SOBITION OF THE PROPOSED OR COMPLETE OPERATIONS. See the attached procedures for the  Regulatory Analyst II  SIGNATURE  DATE	TYPE OF SUBMISSION		TYPE OF ACTION					
APPCIAINS CHANGE TO PREVIOUS PLANS CHANGE TUBBNO CHANGE TUBBNO COMMINGUE PRODUCING FORMATIONS CONVERT WALL LITTLE CONVERT WELL STIES COMMINGUE PRODUCING FORMATIONS CONVERT WELL TYPE    SUBSEQUENT REPORT CHANGE   PLUG AND ABANDON   PLUG BADA ABAND	A MATIOT OF MITTHE	ACIDIZE	ALTER CASING	CASING REPAIR				
CHANGE WELL STATUS	Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME				
Date of Work Completion:    OPERATOR CHANGE	372072013	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE				
SPUD REPORT   PRODUCTION START OR RESUME   RECLAMATION OF WELL SITE   RECOMPLETE DIFFERENT FORMATION   SIDETRACK TO REPAIR WELL   TEMPORARY ABANDON   TUBING REPAIR   VENT OR FLARE   WATER DISPOSAL   APD EXTENSION   APD EXTENSION   OTHER   TUBING REPAIR   WATER DISPOSAL   APD EXTENSION   OTHER   TUBING REPAIR   WATER SHUTOFF   SI TA STATUS EXTENSION   OTHER   TUBING REPAIR   WATER DISPOSAL   APD EXTENSION   OTHER   TUBING REPAIR   T		DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION				
SPUD REPORT   Date of Spud:		OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK				
Date of Spud:    REPERFORATE CURRENT FORMATION   SIDETRACK TO REPAIR WELL   TEMPORARY ABANDON     TUBING REPAIR   VENT OR FLARE   WATER DISPOSAL     WATER SHUTOFF   SI TA STATUS EXTENSION   APPRICATE DOPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.   KERR MCGEE OIL & GAS ONSHORE LP is requesting to do a recomplete on the NBU 921-21A3DS. See the attached procedures for the recomplete.    NAME (PLEASE PRINT)   PHONE NUMBER   TITLE     Doreen Green   435 781-9758   DATE     DATE   SIGNATURE   DATE     DATE   SIGNATURE   DATE     DATE   TEMPORARY ABANDON     WATER DISPOSAL   W	SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION				
DRILLING REPORT Report Date:  WILDCAT WELL DETERMINATION  OTHER  12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  KERR MCGEE OIL & GAS ONSHORE LP is requesting to do a recomplete on the NBU 921-21A3DS. See the attached procedures for the recomplete.  Date: September 28, 2015  By:  NAME (PLEASE PRINT) Doreen Green  435 781-9758  DATE  DATE		✓ REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON				
NAME (PLEASE PRINT)		TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL				
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  KERR MCGEE OIL & GAS ONSHORE LP is requesting to do a recomplete on the NBU 921-21A3DS. See the attached procedures for the recomplete.  Date: September 28, 2015  By:  NAME (PLEASE PRINT)  Doreen Green  435 781-9758  PHONE NUMBER Regulatory Analyst II  SIGNATURE  DATE		WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION				
KERR MCGEE OIL & GAS ONSHORE LP is requesting to do a recomplete on the NBU 921-21A3DS. See the attached procedures for the recomplete.    Accepted by the Utah Division of Oil, Gas and Mining		WILDCAT WELL DETERMINATION	OTHER	OTHER:				
Doreen Green 435 781-9758 Regulatory Analyst II  SIGNATURE DATE	KERR MCGEE OIL & GAS ONSHORE LP is requesting to do a recomplete on the NBU 921-21A3DS. See the attached procedures for the recomplete.  Accepted by the Utah Division of Oil, Gas and Mining							
SIGNATURE DATE								
	SIGNATURE	-30 101 3100	DATE					

Sundry Number: 66347 API Well Number: 43047506110000



# **Greater Natural Buttes Unit**

NBU 921-21A3DS
RE-COMPLETIONS PROCEDURE
NBU 921-21A PAD
FIELD ID: GREEN WELL

DATE: 9/22/2015 AFE#:2028693 API#:4304750611

**USER ID: GBN569** (Frac Invoices Only)

COMPLETIONS ENGINEER: Jose Moreno

201-424-8022 (Cell)

REMEMBER SAFETY FIRST!

Sundry Number: 66347 API Well Number: 43047506110000

Name: NBU 921-21A3DS

Location: SE SW NE NE Sec 21 T9S R21E

**LAT:** 40.026039 **LONG:** -109.550214 **COORDINATE:** NAD83 (Surface Location)

**Uintah County, UT** 

**ELEVATIONS:** 4829' GL 4855' KB *Frac Registry TVD: 11230*'

**TOTAL DEPTH:** 11240' **PBTD:** 11209'

**SURFACE CASING:** 8 5/8", 28# J-55 LT&C @ 2741'

**PRODUCTION CASING:** 4 1/2", 11.6#, P-110 DQX LTC @ 5067' 4 1/2", 11.6#, P-110 LTC @ 5067-11254'

Marker Joint 5023-5045, 7889-7910, and 10620-10639'

#### **TUBULAR PROPERTIES:**

	BURST	COLLAPSE	DRIFT DIA.	CAPACITIES	
	(psi)	(psi)	(in.)	(bbl/ft)	(gal/ft)
2 3/8" 4.7# N-80	11,200	11,780	1.901"	0.00387	0.1624
tbg					
4 ½" 11.6# I-80	7780	6350	3.875"	0.0155	0.6528
(See above)					
4 ½" 11.6# P-	10691	7580	3.875"	0.0155	0.6528
110					
2 3/8" by 4 ½"				0.0101	0.4227
Annulus					

TOPS: BOTTOMS:

1689' Green River Top

1983' Bird's Nest Top

2304' Mahogany Top

4995' Wasatch Top 8262' Wasatch Bottom

8262' Mesaverde Top 11240' Mesaverde Bottom (TD)

**T.O.C.** @ 380' SLB CBL 3/23/2012

#### **GENERAL NOTES:**

#### • Please note that:

- All stages on this procedure may or may not be completed due to low frac gradients, timing, or other possible reasons. Total stages completed can be found in the post-job-report.
- CBP depth on this procedure is only to be used as a reference. This depth is subject to change as per field operations and the discretion of the wireline supervisor and field foreman.
- A minimum of 11 tanks (cleaned lined 500 bbl) of recycled water will be required. Note: Use biocide in tanks and the water needs to be at least 45°F at pump time.
- All perforation depths are from Halliburton's Induction-Density-Neutron log dated 3/15/2012
  - o LOG bridged out at 9689. SLB CBL dated 3/23/2012 was tied in.
- 1 fracturing stages required for coverage.
- Hydraulic isolation estimated at **3870** based upon Schlumberger's CBL dated 3/23/2012.
- Procedure calls for 2 CBP's (8000 psi).

Sundry Number: 66347 API Well Number: 43047506110000

- Calculate open perforations after each breakdown. If less than 60% of the perforations appear to be open, ball out with 15% HCl.
- Pump scale inhibitor at 0.5 gpt. Remember to pre-load the casing with scale inhibitor.
- FR will be pumped at 0.3 gpt for this well. This concentration will be raised or lowered on the job at the discretion of the APC foreman per the well's treating pressure.
- 30/50 mesh Ottawa sand, Slickwater frac.
- Maximum surface pressure 7000 psi.
- If casing pressure test fails. Contact Denver Engineer.
- Flush volumes are the sum of slick water and acid used during displacement (include scale inhibitor as mentioned above). Stage acid and scale inhibitor if necessary to cover the next perforated interval.
- Call flush at 0 PPG @ inline densiometers. Slow to 5 bbl/min over last 10-20 bbls of flush. Flush to top perf.
- Max Sand Concentration: Mesaverde 1 ppg;
- If distance between plug and top perf of previous stage is less than 50', it is considered to be tight spacing design will over flush stage by 5 bbls (from top perf)
- TIGHT SPACING ON STAGE
- If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work

#### **Existing Perforations:**

Please insert perforations from OpenWells. Make sure you QC perfs.

rease insert perforations from open wens. Make sure you de peris.							
PERFORATIONS							
<u>Formation</u>	<u>Zone</u>	<u>Top</u>	<u>Btm</u>	<u>Date</u>	<u>Reason</u>	Comments	
MESAVERDE	BLACKHAWK	10720	10724	05/01/2012	PRODUCTION		
MESAVERDE	BLACKHAWK	10748	10750	05/01/2012	PRODUCTION		
MESAVERDE	BLACKHAWK	10784	10786	05/01/2012	PRODUCTION		
MESAVERDE	BLACKHAWK	10809	10810	05/01/2012	PRODUCTION		
MESAVERDE	BLACKHAWK	10817	10819	05/01/2012	PRODUCTION		
MESAVERDE	BLACKHAWK	10873	10876	05/01/2012	PRODUCTION		
MESAVERDE	BLACKHAWK	11022	11025	05/01/2012	PRODUCTION		
MESAVERDE	BLACKHAWK	11101	11104	05/01/2012	PRODUCTION		

#### **Relevant History:**

5/15/2012: Originally completed in Mesaverde formation (1 stages) with ~ 335,828 gallons of

Slickwater, 183,479 lbs of 30/50 Ottawa Sand sand

11/20/2014: Last slickline report:

DRIVE TO LOCATION, HAVE SAFETY MEETING, RIG UP, TUBING PRESSURE 242, CASING PRESSURE 281, RIH WITH JDC TO 10714' AND FISH PAD PLUNGER, PLUNGER GOOD, RIH WITH JDC TO 10714' AND FISH SPRING, RIH WITH 1.90 BROACH TO SN, DROP SPRING, RIH AND CHASE SPRING TO SN, DROP PAD PLUNGER, RIG DOWN MOVE LOCATIONS.

5/ 16 /2012: Tubing Currently Landed @~10,721' ( 388 JTS)

### **H2S History:**

Insert recent/available H<sub>2</sub>S data from Amulet (??)

<u>PROCEDURE</u>: (If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work.)

- 1. MIRU. Control well with recycled water and biocide as required. ND WH, NU BOP's and test.
- 2. The tubing is below the proposed CBP depth. TOOH with 2-3/8", 4.7#, P-110 tubing. Visually inspect for scale and consider replacing if needed. The tubing is above the proposed CBP depth, RIH with 2-3/8", 4.7#, P-110 tubing and tag for fill before TOOH. Visually inspect for scale and consider replacing if needed
- 3. If the looks ok consider running a gauge ring to 10,296 (50' below proposed CBP). Otherwise P/U a mill and C/O to 10,296 (50' below proposed CBP).
- 4. Set 8000 psi CBP at ~ 10,246'. ND BOPs and NU frac valves Test frac valves and casing to to 7,000 psi for 15 minutes; if pressure test fails contact Denver engineer and see notes above. Lock OPEN the Braden head valve. Flow from annulus will be visually monitored throughout stimulation. If release occurs, stimulation will be shut down. Well conditions will be assessed and actions taken as necessary to secure the well. UDOGM will be notified if a release to the annulus occurs.
- 5. Pressure test frac lines to max surface pressure + 1000 psi for 15 minutes. Pressure loss should be less than 10% to be considered acceptable. Check and correct for existing leaks.
- 6. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

```
Zone From To spf # of shots
MESAVERDE 10162 10164 3 6
MESAVERDE 10180 10182 3 6
MESAVERDE 10194 10196 3 6
MESAVERDE 10214 10216 3 6
```

- 7. Breakdown perfs and establish injection rate (<u>include scale inhibitor in fluid</u>). Spot 250 gals of 15% HCL and let soak 5-10 min. Fracture as outlined in Stage 1 on attached listing. Under-displace to ~10162' and flush only with recycled water .
- 8. Set 8000 psi CBP at~10116'.
- 9. ND Frac Valves, NU and Test BOPs.
- 10. TIH with 3 7/8" bit, pump open sub, SN and tubing.
- 11. Drill 1 plugs and clean out to a depth of 10236' (~ 20' below bottom perfs).
- 12. Shift pump open bit sub and land tubing at 10,132'. Flow back completion load. RDMO.

- 13. Clean out well with foam and/or swabbing unit until steady flow has been established from completion.
- 14. Leave surface casing valve open. Monitor and report any flow from surface casing. RDMO

### Key Contact information

### For design questions, please call Completion Engineer

Jose Moreno: 201/424-8022, 720/929-4380

### For field implementation questions, please call

Completion Supervisor Foreman

Jeff Samuels: 435/828-6515, 435/781-7046 Brad Burman: 435/828-8006, 435/781-7042

### **Production Engineer**

Robert Miller: 435/781-7041, 435/828-6510 Mickey Doherty: 435/781-9740, 406/491-7294 Ronald Trigo: 435/781-7037, 352/213-6630 Ryckur Schuttler: 435/781-7055, 954/675-1037

Boone Bajgier: 435/781-7096, 713/416-4816

Jake Roberts: 435/781-7015, 716/499-6569

### Completion Manager

Jeff Dufresne: 720/929-6281, 303/241-8428

Vernal Main Office

435/789-3342

Vernal IOC

435/781-9751

### Emergency Contact Information—Call 911

Vernal Regional Hospital Emergency: 435/789-3342

Police: 435/789-5835 Fire: 435/789-4222

Service Company S	upplied C	hemicals - Job	<u>l otals</u>	
Friction Reducer	57	gals @	0.3	GPT
Surfactant	143	gals @	0.75	GPT
Clay Stabilizer	95	gals @	0.5	GPT
15% Hcl	250	gals @	250	gal/stg
Iron Control for acid	1	gals @	5.0	GPT of acid
Surfactant for acid	1	gals @	2.0	GPT of acid
Corrosion Inhibitor for acid	2	gals @	6.0	GPT of acid

Third Party Supplied Chemicals Job	Totals -	Include Pumping	Charge if A	pplicable_
Scale Inhibitor	95	gals pumped	0.5	GPT (see schedule)
Biocide	57	gals @	0.3	GPT

		Perfs			Rate	Fluid	Initial	Final	Fluid	Volume	Cum Vol	Volume	Cum Vol	Fluid	Sand	Sand	Cum. Sand Footage from	Footage from	Scale
Stage	Zone	Top, ft. Bot., ft SPF Holes	SPF	Holes	BPM	Type	bdd	bdd		gals	gals	BBLs	BBLs	%of frac	% of frac	sql	sql	CBP to Flush	gal.
-	MESAVERDE	10162 10164	e	9	Varied	Varied Pre-Pad & Pump-in test			Slickwater	6,634	6,634	158	158						က
	MESAVERDE	10180 10182	3	9		0 ISIP and 5 min ISIP													
	MESAVERDE	10194 10196	3	9		50 Slickwater Pad			Slickwater	146,025	152,659	3,477		82.5%	, 0.0%		0 0		73
_	MESAVERDE	10214 10216	3	9		50 Slickwater Ramp	0.25	0.625	Slickwater	10,325	162,984	246		5.8%	21.9%	4,517			S
	MESAVERDE		3		20	50 SW Sweep	0	0	Slickwater	0	162,984	0	3,881		0.0%				0
	MESAVERDE		8		20	50 Slickwater Ramp	0.63	0.75	Slickwater	10,325	173,309	246	4,126	5.8%	34.4%	% 7,098			2
	MESAVERDE				20	50 SW Sweep	0	0	Slickwater	0	173,309	0	4,126		0.0%	· *	11,616		0
	MESAVERDE				20	50 Slickwater Ramp	0.25	0.75	Slickwater	0	173,309	0	4,126		0.0%	· ·	11,616		0
	MESAVERDE				20	50 Slickwater Ramp	0.75	<del>-</del>	Slickwater	10,325	183,634	246	4,372	5.8%	43.8%	9,034			S
	MESAVERDE				20	50 Flush (4-1/2)				6,844	190,478	163	4,535				20,650		0
_	MESAVERDE					ISDP and 5 min ISDP					190,478								95
	MESAVERDE																		
	MESAVERDE																		
	MESAVERDE								Sand laden Volume	э	177,000								
															gal	gal/ft 3,000		350 lbs sand/ft	
		# of Perfs/stage	s/stage	24									Flush depth 10,162	10,162		CBP depth 10,116	10,116	46	
					90.7	<< Above pump time (min)													

Name NBU 921-21A3DS Perforation and CBP Summary

		Per	forations					
Stage	Zones	Top, ft	Bottom, ft	SPF	Holes	Frac	ture Cover	age
1	MESAVERDE	10162	10164	3	6	10159	to	10218
	MESAVERDE	10180	10182	3	6			
	MESAVERDE	10194	10196	3	6			
	MESAVERDE	10214	10216	3	6			
	MESAVERDE			3				
	MESAVERDE			3				
	MESAVERDE							
	MESAVERDE							
			·		•			
	# of Perfs/stage		·		24	CBP DEPTH	10,116	
								·

MD (ft)	TVD (ft)	Inc (°)	MD (ft)	TVD (ft)	Inc (°)
22.01	22.01	0	577	1 1	1.13
192.01	192	0.88	586	5857.88	1
277.01	276.97	2.23	596	1 5952.86	1.44
362.01	361.86	3.5	605	5 6046.83	1.69
452.01	451.66	4.19	615	6141.82	0
542.01	541.4	4.56	624	4 6235.82	0.36
632.01	631.1	4.69	633	6329.82	0.44
722.01	720.77	5.25	643	6424.81	0.56
812.01	810.41	5	652	7 6518.81	0.94
902.01	900.03	5.5	662	2 6613.8	0.63
992.01	989.58	6	671	6707.79	0.88
1082.01	1079.12	5.5	681	6801.78	1
1172.01	1168.68	5.81	690	6896.77	0.31
1262.01	1258.24	5.63	699	6990.77	0.31
1352.01	1347.81	5.56	709	4 7085.77	0.31
1442.01	1437.37	5.69	718	7179.77	0.5
1532.01	1526.91	5.94	728	3 7274.76	0.63
1622.01	1616.45	5.69	737	7368.76	0.75
1712.01	1706.07	4.81	747	2 7463.75	0.56
1802.01	1795.74	5.06	756	5 7557.75	0.25
1892.01	1885.3	6.19	766	1 7652.75	0.13
1982.01	1974.93	4.25	775	7746.75	0.13
2072.01	2064.71	3.81	785	7841.75	0.44
2162.01	2154.57	2.5	794	7935.75	0.19
2252.01	2244.52	1.25	803	9 8030.75	0.06
2342.01	2334.51	0.88	813	8124.75	0.3
2432.01	2424.49	1	822		0.38
2522.01	2514.48	1.19	832	2 8313.74	0.69
2612.01	2604.47	0.38	841	8407.74	0.25
2725.01	2717.47	0.31	851	1 8502.74	0.38
2844	2836.46	0.18	860	5 8596.74	0.75
2939	2931.45	0.27	870		0.94
3033	3025.45	0.44	879		1.13
3128	3120.45	0.56	888		1.19
3222	3214.44	0.81	898		1.19
3316	3308.43	1.19	907		1.31
3410	3402.41	1.19	917		1.06
3504	3496.39	1.31	926		1.19
3599	3591.36	1.56	936		
3693	3685.32	1.75	945		1.81
3788	3780.27	1.81	955		2
3882			964		2.63
3977	3969.16	2.06	974		2.25
4071	4063.11	1.63	983		
4166	4158.07	2	993		2.13
4260	4252.02	1.88	1002		2.25
4354	4346	0.44	1012		2.44
4449	4441 4536	0.06	1021		2.69
4544		0.63	1030		2.75
4638	4629.99 4724.98	0.94	1040		
4733 4827	4724.98	0.69 1.06	1049		2.81
4922	4818.97	0.81	1059 1068		2.75 2.94
		0.81			
5016 5111	5007.95 5102.94	0.81	1078 1087		2.75
5205	5102.94	0.81	1097		2.73
5299	5290.93	0.44	1106		
5394	5385.93	0.44	1115		3.38
5488	5479.93	0.31	1113		3.31
5583	5574.93	0.31	1124		3.31
5677	5668.92	1.25	1124	11229.02	3.31
30//	5000.92	1.25			

### Acid Pickling and H2S Procedures (If Required)

### \*\*PROCEDURE FOR PUMPING ACID DOWN TBG

WHEN FINDING SCALE IN TUBING THAT IS ACID SOLUBLE, ENSURE THAT PLUNGER EQUIPMENT IS REMOVED AND ABLE TO PUMP DOWN TBG. INSTALL A 'T' IN PUMP LINE W/2" VALVE THAT NALCO CAN TIE INTO. HAVE 60 BBLS 2% KCL MIXED W/ 10-15 GAL H2S SCAVENGER IN RIG FLAT TANK. (WE USED THE RIG FLAT TANK FOR MIXING CHEMICAL SO WE DIDN'T HAVE THE CHEMICAL IN ALL FLUIDS ON LOCATION, ONLY WHAT WE NEEDED TO PUMP DOWN HOLE)

- 1. PUMP 5-10 BBLS 2% KCL DOWN TBG (NALCO CANNOT PUMP AGAINST PRESSURE)
- 2. NALCO WILL PUMP 3 DRUMS HCL (31%) INTO PUMP LINE.
- 3. FLUSH BEHIND ACID WITH 10-15 BBL 2% KCL
- 4. PUMP 2—30 BBL 2% W/ H2S SCAVENGER DOWN TBG.
- 5. PUMP REMAINDER OF 2% W/ H2S SCAVENGER DOWN CASING AND SHUT WELL IN FOR MINIMUM OF 2 HRS.
- 6. OVER DISPLACE DOWN TBG AND CSG TO FLUSH ACID AND SCAVENGER INTO FORMATION
- 7. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

### \*\* PROCEDURE FOR PUMPING H2S SCAVENGER WITHOUT ACID

PRIOR TO RIG MOVING ON OR AS RIG PULLS ONTO LOCATION. TEST CASING, TUBING AND SEPARATOR FOR H2S. IF FOUND MAKE SURE THAT PLUNGER SYSTEM IS REMOVED (IT IS POSSIBLE TO PUMP AROUND PLUNGERS BUT SOME WILL HAVE A STANDING VALVE IN SEATING NIPPLE).

- 1. MIX 10-15 GAL H2S SCAVENGER WITH 60-100 BBL 2% KCL IN RIG FLAT TANK.
- 2. PUMP 25 BBLS MIXTURE DOWN TUBING AND REST DOWN CASING. SHUT WELL IN FOR 2 HOURS.
- 3. IF WELL HAS PRESSURE AFTER 2 HOURS RETEST CASING AND TUBING FOR H2S.
- 4. FLUSH TUBING AND CASING PUSHING H2S SCAVENGER INTO FORMATION.
- 5. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

<sup>\*\*</sup> As per APC standard operating procedure, APC foreman will verify ALL volumes pumped and record on APC Volume Report Form

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0576
SUNDF	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
	oposals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-21A3DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047506110000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18t	h Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 73779 720 929-	9. FIELD and POOL or WILDCAT: 1NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1025 FNL 0815 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNS	<b>HIP, RANGE, MERIDIAN:</b> 21 Township: 09.0S Range: 21.0E Merid	ian: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
10/9/2015	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Bate.			
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
The NBU 921-21A	COMPLETED OPERATIONS. Clearly show a 3DS well was returned to problems. Thank ollowing a recomplete. Thank	oduction on 10/9/2015	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 13, 2015
NAME (PLEASE PRINT) Jennifer Thomas	PHONE NUMB	ER TITLE Regulatory Specialist	
SIGNATURE	720 929-6808	DATE	
SIGNATURE   N/A		10/12/2015	

	STATE OF UTAH		FORM 9				
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0576				
SUNDR	Y NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE				
	posals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES				
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 921-21A3DS				
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		<b>9. API NUMBER:</b> 43047506110000				
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 8021	<b>PHONE NUMBER:</b> 720 929-6	9. FIELD and POOL or WILDCAT: 5NATUERAL BUTTES				
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1025 FNL 0815 FEL			COUNTY: UINTAH				
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NENE Section: 2	HIP, RANGE, MERIDIAN: 11 Township: 09.0S Range: 21.0E Meric	tian: S	STATE: UTAH				
11. CHECI	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOF	RT, OR OTHER DATA				
TYPE OF SUBMISSION		TYPE OF ACTION					
	ACIDIZE	ALTER CASING	CASING REPAIR				
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME				
10/28/2015	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE				
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION				
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK				
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	✓ RECOMPLETE DIFFERENT FORMATION				
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON				
Julio di Opular							
	L TUBING REPAIR		WATER DISPOSAL				
DRILLING REPORT Report Date:	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION				
	WILDCAT WELL DETERMINATION	OTHER	OTHER:				
Kerr-McGee Oil & gasecond formation in	12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Kerr-McGee Oil & gas Onshore, LP respectfully requests to recomplete a second formation in the NBU 921-21A3DS well. Please see the attached procedure for details. Thank you.  Accepted by the Utah Division of Oil, Gas and Mining						
			Date: October 28, 2015				
			By: Der K Dunf				
NAME (PLEASE PRINT)	PHONE NUMB	SER TITLE					
Kristina Geno	720 929-6824	Regulatory Analyst					
SIGNATURE N/A		<b>DATE</b> 10/27/2015					



### **Greater Natural Buttes Unit**

NBU 921-21A3DS
RE-COMPLETIONS PROCEDURE
NBU 921-21A PAD
FIELD ID: GREEN WELL

**DATE:** 10/26/15

AFE#:

API#:4304750611

**USER ID: GBN569** (Frac Invoices Only)

COMPLETIONS ENGINEER: Jose Moreno

201-424-8022 (Cell)

REMEMBER SAFETY FIRST!

Name: NBU 921-21A3DS

Location: NE NE Sec 21 T9S R21E

**LAT:** 40.026039 **LONG:** -109.550214 **COORDINATE:** NAD83 (Surface Location)

**Uintah County, UT** 

**ELEVATIONS:** 4829' GL 4855' KB Frac Registry TVD: 11230'

**TOTAL DEPTH:** 11240' **PBTD:** 11209'

**SURFACE CASING:** 8 5/8", 28# J-55 LT&C @ 2741'

**PRODUCTION CASING:** 4 1/2", 11.6#, P-110 DQX LTC @ 5067' 4 1/2", 11.6#, P-110 LTC @ 5067-11254'

Marker Joint 5023-5045, 7889-7910, and 10620-10639'

### **TUBULAR PROPERTIES:**

	BURST	COLLAPSE	DRIFT DIA.	CAPACITIES	
	(psi)	(psi)	(in.)	(bbl/ft)	(gal/ft)
2 3/8" 4.7# N-80	11,200	11,780	1.901"	0.00387	0.1624
tbg					
4 ½" 11.6# I-80	7780	6350	3.875"	0.0155	0.6528
(See above)					
4 ½" 11.6# P-	10691	7580	3.875"	0.0155	0.6528
110					
2 3/8" by 4 ½"				0.0101	0.4227
Annulus					

TOPS: BOTTOMS:

1689' Green River Top

1983' Bird's Nest Top

2304' Mahogany Top

4995' Wasatch Top 8262' Wasatch Bottom

8262' Mesaverde Top 11240' Mesaverde Bottom (TD)

**T.O.C.** @ 380' SLB CBL 3/23/2012

### **GENERAL NOTES:**

### • Please note that:

- All stages on this procedure may or may not be completed due to low frac gradients, timing, or other possible reasons. Total stages completed can be found in the post-job-report.
- CBP depth on this procedure is only to be used as a reference. This depth is subject to change as per field operations and the discretion of the wireline supervisor and field foreman.
- A minimum of **38** tanks (cleaned lined 500 bbl) of recycled water will be required. Note: Use biocide in tanks and the water needs to be at least 45°F at pump time.
- All perforation depths are from Halliburton's Induction-Density-Neutron log dated 3/15/2012
  - o LOG bridged out at 9689. SLB CBL dated 3/23/2012 was tied in.
- 2 fracturing stages required for coverage.
- Hydraulic isolation estimated at **3870** based upon Schlumberger's CBL dated 3/23/2012.
- Procedure calls for 3 CBP's (8000 psi).

2

- Calculate open perforations after each breakdown. If less than 60% of the perforations appear to be open, ball out with 15% HCl.
- Pump scale inhibitor at 0.5 gpt. Remember to pre-load the casing with scale inhibitor.
- FR will be pumped at 0.3 gpt for this well. This concentration will be raised or lowered on the job at the discretion of the APC foreman per the well's treating pressure.
- 30/50 mesh Ottawa sand, **Slickwater frac**.
- Maximum surface pressure 7000 psi.
- If casing pressure test fails. Contact Denver Engineer.
- Flush volumes are the sum of slick water and acid used during displacement (include scale inhibitor as mentioned above). Stage acid and scale inhibitor if necessary to cover the next perforated interval.
- Call flush at 0 PPG @ inline densiometers. Slow to 5 bbl/min over last 10-20 bbls of flush. Flush to top perf.
- Max Sand Concentration: Mesaverde 1 ppg;
- If distance between plug and top perf of previous stage is less than 50', it is considered to be tight spacing design will over flush stage by 5 bbls (from top perf)
- TIGHT SPACING ON STAGE 1
- If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work

### **Existing Perforations:**

Please insert perforations from OpenWells. Make sure you QC perfs.

-	rease misert pe	TIOI attolis II OI	n Open v	V C115. 1VI	ake sure ye	ou QC peris.		
	PERFORATIONS							
	<u>Formation</u>	<u>Zone</u>	Top	<u>Btm</u>	<u>Date</u>	<u>Reason</u>	Comments	
	MESAVERDE	BLACKHAWK	10720	10724	05/01/2012	PRODUCTION		
	MESAVERDE	BLACKHAWK	10748	10750	05/01/2012	PRODUCTION		
	MESAVERDE	BLACKHAWK	10784	10786	05/01/2012	PRODUCTION		
	MESAVERDE	BLACKHAWK	10809	10810	05/01/2012	PRODUCTION		
	MESAVERDE	BLACKHAWK	10817	10819	05/01/2012	PRODUCTION		
	MESAVERDE	BLACKHAWK	10873	10876	05/01/2012	PRODUCTION		
	MESAVERDE	BLACKHAWK	11022	11025	05/01/2012	PRODUCTION		
	MESAVERDE	BLACKHAWK	11101	11104	05/01/2012	PRODUCTION		

### **Relevant History:**

5/15/2012: Originally completed in Mesaverde formation (1 stages) with ~ 335,828 gallons of

Slickwater, 183,479 lbs of 30/50 Ottawa Sand sand

11/20/2014: Last slickline report:

DRIVE TO LOCATION, HAVE SAFETY MEETING, RIG UP, TUBING PRESSURE 242, CASING PRESSURE 281, RIH WITH JDC TO 10714' AND FISH PAD PLUNGER, PLUNGER GOOD, RIH WITH JDC TO 10714' AND FISH SPRING, RIH WITH 1.90 BROACH TO SN, DROP SPRING, RIH AND CHASE SPRING TO SN, DROP PAD PLUNGER, RIG DOWN MOVE LOCATIONS.

5/ 16 /2012: Tubing Currently Landed @~10,721' ( 388 JTS)

10/7/2015 FRAC STG#1, SET KILL PLUG, RDMO

10/9/2015 319 JTS 23/8 YELLOW BAND P-110 TBG. EOT @ 10,143'

### **H2S History:**

Insert recent/available H<sub>2</sub>S data from Amulet (??)

<u>PROCEDURE</u>: (If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work.)

- 1. MIRU. Control well with recycled water and biocide as required. ND WH, NU BOP's and test
- 2. The tubing is below the proposed CBP depth. TOOH with 2-3/8", 4.7#, P-110 tubing. Visually inspect for scale and consider replacing if needed. The tubing is above the proposed CBP depth, RIH with 2-3/8", 4.7#, P-110 tubing and tag for fill before TOOH. Visually inspect for scale and consider replacing if needed
- 3. Set 8000 psi CBP at ~ 9,786'. ND BOPs and NU frac valves Test frac valves and casing to to 7,000 psi for 15 minutes; if pressure test fails contact Denver engineer and see notes above. Lock OPEN the Braden head valve. Flow from annulus will be visually monitored throughout stimulation. If release occurs, stimulation will be shut down. Well conditions will be assessed and actions taken as necessary to secure the well. UDOGM will be notified if a release to the annulus occurs.
- 4. Pressure test frac lines to max surface pressure + 1000 psi for 15 minutes. Pressure loss should be less than 10% to be considered acceptable. Check and correct for existing leaks.
- 5. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	То	spf	# of shots
MESAVERDE	9550	9551	3	3
MESAVERDE	9569	9570	3	3
MESAVERDE	9642	9643	3	3
MESAVERDE	9668	9669	3	3
MESAVERDE	9688	9689	3	3
MESAVERDE	9709	9710	3	3
MESAVERDE	9754	9756	3	6

- 6. Breakdown perfs and establish injection rate (<u>include scale inhibitor in fluid</u>). Spot 250 gals of 15% HCL and let soak 5-10 min. Fracture as outlined in Stage 1 on attached listing. Under-displace to ~9550' and trickle 250gal 15% HCL w/ scale inhibitor in flush . **NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS**
- 7. Set 8000 psi CBP at~9532'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone From To spf # of shots MESAVERDE 9350 9351 3 3

```
MESAVERDE 9382
                 9383
                             3
                             3
MESAVERDE 9406
                 9407
                       3
MESAVERDE 9440
                 9441
                       3
                             3
MESAVERDE 9482
                 9484
                       3
                             6
MESAVERDE 9515
                9517
                       3
                             6
```

- 8. Breakdown perfs and establish injection rate (<u>include scale inhibitor in fluid</u>). Fracture as outlined in Stage 2 on attached listing. Under-displace to ~9350' and flush only with recycled water .
- 9. Set 8000 psi CBP at ~9300'
- 10. ND Frac Valves, NU and Test BOPs.
- 11. TIH with 3 7/8" bit, pump open sub, SN and tubing.
- 12. Drill 2 plugs and clean out to a depth of 9776' (~ 20' below bottom perfs).
- 13. Shift pump open bit sub and land tubing at 9520'. Flow back completion load. RDMO.
- 14. Clean out well with foam and/or swabbing unit until steady flow has been established from completion.
- 15. Leave surface casing valve open. Monitor and report any flow from surface casing. RDMO

### **Key Contact information**

### For design questions, please call Completion Engineer

Jose Moreno: 201/424-8022, 720/929-4380

### For field implementation questions, please call

Completion Supervisor Foreman

Jeff Samuels: 435/828-6515, 435/781-7046 Brad Burman: 435/828-8006, 435/781-7042

### Production Engineer

Robert Miller: 435/781-7041, 435/828-6510 Mickey Doherty: 435/781-9740, 406/491-7294 Ronald Trigo: 435/781-7037, 352/213-6630 Ryckur Schuttler: 435/781-7055, 954/675-1037 Boone Bajgier: 435/781-7096, 713/416-4816

Jake Roberts: 435/781-7015, 716/499-6569

### Completion Manager

Jeff Dufresne: 720/929-6281, 303/241-8428

Vernal Main Office

435/789-3342

Vernal IOC

435/781-9751

### Emergency Contact Information—Call 911

Vernal Regional Hospital Emergency: 435/789-3342

Police: 435/789-5835 Fire: 435/789-4222

Service Company Supplied Chemicals - Job Totals

Oct vice Company Co	аррпса с	Ticitiicais	000	10tais	
Friction Reducer	211	gals @		0.3	GPT
Surfactant	528	gals @		0.75	GPT
Clay Stabilizer	352	gals @		0.5	GPT
15% Hcl	500	gals @		250	gal/stg
Iron Control for acid	3	gals @		5.0	GPT of acid
Surfactant for acid	1	gals @		2.0	GPT of acid
Corrosion Inhibitor for acid	3	gals @		6.0	GPT of acid

### Third Party Supplied Chemicals Job Totals - Include Pumping Charge if Applicable

Scale Inhibitor	352	gals pumped	0.5	GPT (see schedule)
Biocide	211	gals @	0.3	GPT

	Copy to new book	ew book	Casing Size Recomplete? Pad? ACTS? Days on Pad?	8.5 × × × × × × × × × × × × × × × × × × ×			Swabbing Days Production Log DFIT GR only	0 0 0	Enter Number of swabt Enter 1 if running a Pro Enter Number of DFITs Enter Y if only Gamma Enter Y if a LOW conce	Enter Number of awabbing days here for recompletes Enter 1 if running a Production Log Enter Number of DETs Enter Number of DETs Enter Yif only Gamma Ray log was run Enter Y if a LOW concentration of Scale Inhibitor will be pumped	here for recompl Log was run of Scale Inhibitor	etes will be pun	pədı			
		Rate	Wells on Pad?	nitial	Final	Fluid	Clay Stab.	Cum Vol	Enter N if the Volume	Enter N if there will be NO Clay stabilizer  Volume Cum Vol Flu	stabilizer Fluid	Sand	Sand	Cum. Sand Footage from	Footage from	Scale
Bot #	SPF	Holes BPM	Tvpe	ğ			882	slen	RBIA	HH W	% of frac	% of frac	şq	<u>8</u>	CBP to Flush	Inhib.,
				2	2		i i	200								5
9551	3	3 Varied	3 Varied Pre-Pad & Pump-in test			Slickwater	6 234	6 234	148	148		L				67
9570	3	3	0 ISIP and 5 min ISIP					21,0		2						)
9643	3	3 50	50 Slickwater Pad			Slickwater	280.913	287 147		6 837	82.5	%0.0	0	0		140
6996	3	3 20	50 Slickwater Ramp	0.25	0.625	Slickwater	19,862	307,009			2.8%		8.69	8.690		10
6896	e	3 50	50 SW Sweep	0		Slickwater	0	307,009						8,690		0
9710	3	3 50	50 Slickwater Ramp	0.63		Slickwater	19,862	326,872			9.8%	.,	13.65	22,345		10
9756	3	9	SW Sweep	0		Slickwater	0	326,872				0.0%		22,345		0
		200	Slickwater Ramp	0.25	0.75	Slickwater	0	326,872				%0.0	0	22,345		0
		50	50 Slickwater Ramp	0.75		Slickwater	19 862	346 734			9.8%	4	17 380	39,725		10
		20	50 Flush (4-1/2)				6,444	353,178	153	8,409				39,725		<u>က</u>
			ISDP and 5 min ISDP					353,178								177
						Oand laden Volume	g	340 500								
							2	040,000				qal/ft	3,000	350	350 lbs sand/ft	
	# of Perfs/stage	24								Flush depth 9,550	9,550		品		18	
		168.2	<< Above pump time (min)													
9351	3	3 Varied	3 Varied Pump-in test			Slickwater		0	0	0						
9383	3	ر 8	0 ISIP and 5 min ISIP													
	9407 3		Slickwater Pad			Slickwater	289,575	289,575	6,895	6,895	85.5%			0		145
	9441 3	3 20	50 Slickwater Ramp	0.25		Slickwater	20,475	310,050	487	7,382	5.8	% 21.9%	8,958	8,958		10
w	9484 3		SW Sweep	0	-	Slickwater	0	310,050		7,382		0.0%	0	8,958		0
-	9517 3	9 20	50 Slickwater Ramp	0.63		Slickwater	20,475	330,525		7,870	2.8%		14,076	23,034		10
	3	50	SW Sweep	0		Slickwater	0	330,525		7,870		0.0%		23,034		0
		50	50 Slickwater Ramp	0.25		Slickwater	0	330,525	0	7,870		%0.0	0	23,034		0
		20	Slickwater Ramp	0.75	-	Slickwater	20,475	351,000		8,357	9.8%	4	17.91	40,950		10
		99	50 Flush (4-1/2)				6,104	357,104	145	8,502				40,950		0
			ISDP and 5 min ISDP					357,104								176
						Sand laden Volume	пе	351,000								
	# of Dorfeletage	34								Elijeh denth 0 350	0.350	gal/ft	t  3,000 CBD denth 9 300		350 lbs sand/ft	
	and the second		170.0 << Above pump time (min)								200,0			0,00	3	
4		48					Total Fluid	710,282	gals	16,911 bbls	ppls	L	Total Sand	80,675		
								16,911 bbls	slqq							
		5.6	10							37.6 tanks	tanks			Total	Total Scale Inhib. =	352

Name NBU 921-21A3DS Perforation and CBP Summary

		Per	forations					
Stage	Zones	Top, ft	Bottom, ft	SPF	Holes	Frac	ture Covera	ge
1	MESAVERDE	9550	9551	3	3	9546	to	9764
	MESAVERDE	9569	9570	3	3			
	MESAVERDE	9642	9643	3	3			
	MESAVERDE	9668	9669	3	3			
	MESAVERDE	9688	9689	3	3			
	MESAVERDE	9709	9710	3	3			
	MESAVERDE	9754	9756	3	6			
	MESAVERDE							
	# of Perfs/stage				24	CBP DEPTH	9,532	
2	MESAVERDE	9350	9351	3	3	9335	to	9525
	MESAVERDE	9382	9383	3	3			
	MESAVERDE	9406	9407	3	3			
	MESAVERDE	9440	9441	3	3			
	MESAVERDE	9482	9484	3	6			
	MESAVERDE	9515	9517	3	6			
	MESAVERDE			3				
	MESAVERDE							
	# of Perfs/stage				24	CBP DEPTH	9,300	
	ľ							

MD (ft)	TVD (ft)	Inc (°)	MD (ft)	TVD (ft)	Inc (°)
22.01	22.01	0	5772	5763.9	1.13
192.01	192	0.88	5866	5857.88	1
277.01	276.97	2.23	5961	5952.86	1.44
362.01	361.86	3.5	6055	6046.83	1.69
452.01	451.66	4.19	6150	6141.82	0
542.01	541.4	4.56	6244	6235.82	0.36
632.01	631.1	4.69	6338	6329.82	0.44
722.01	720.77	5.25	6433	6424.81	0.56
812.01	810.41	5	6527	6518.81	0.94
902.01	900.03	5.5	6622	6613.8	0.63
992.01	989.58	6	6716	6707.79	0.88
1082.01	1079.12	5.5	6810	6801.78	1
1172.01	1168.68	5.81	6905	6896.77	0.31
1262.01	1258.24	5.63	6999	6990.77	0.31
1352.01	1347.81	5.56	7094	7085.77	0.31
1442.01	1437.37	5.69	7188	7179.77	0.5
1532.01	1526.91	5.94	7283	7274.76	0.63
1622.01	1616.45	5.69	7377	7368.76	0.75
1712.01	1706.07	4.81	7472	7463.75	0.56
1802.01	1795.74	5.06	7566	7557.75	0.25
1892.01	1885.3	6.19	7661	7652.75	0.13
1982.01	1974.93	4.25	7755	7746.75	0.13
2072.01	2064.71	3.81	7850	7841.75	0.44
2162.01	2154.57	2.5	7944	7935.75	0.19
2252.01	2244.52	1.25	8039	8030.75	0.06
2342.01	2334.51	0.88	8133	8124.75	0.3
2432.01	2424.49	1	8227	8218.75	0.38
2522.01	2514.48	1.19	8322	8313.74	0.69
2612.01	2604.47	0.38	8416	8407.74	0.25
2725.01	2717.47	0.31	8511	8502.74	0.38
2844	2836.46	0.18	8605	8596.74	0.75
2939	2931.45	0.27	8700	8691.73	0.94
3033	3025.45	0.44	8794	8785.71	1.13
3128	3120.45	0.56	8889	8880.69	1.19
3222 3316	3214.44 3308.43	0.81	8983 9077	8974.67 9068.65	1.19 1.31
3410	3402.41	1.19 1.19	9172	9163.63	1.06
3504	3496.39	1.13	9266	9257.61	1.19
3599	3591.36	1.56	9361	9352.58	1.56
3693	3685.32	1.75	9455	9446.54	1.81
3788	3780.27	1.73	9553	9544.49	2
	3874.22	2	9647		2.63
3882 3977	3969.16	2.06	9742	9638.41 9733.32	2.25
4071	4063.11	1.63	9836	9827.26	2.06
4166	4158.07	2	9931	9922.2	2.13
4260	4252.02	1.88	10025	10016.13	2.25
4354	4346	0.44	10120	10111.05	2.44
4449	4441	0.44	10214	10204.95	2.69
4544	4536	0.63	10308		2.75
4638	4629.99	0.94	10403	10393.74	2.75
4733	4724.98	0.69	10498	10488.63	2.81
4827	4818.97	1.06	10592	10582.52	2.75
4922	4913.96	0.81	10687	10362.32	2.94
5016	5007.95	0.81	10781	10771.27	2.54
5111	5102.94	0.81	10781	10771.27	2.75
5205	5102.94	0.81	10970	10960.03	2.73
5299	5290.93	0.44	11064	11053.9	3.06
5394	5385.93	0.44	11159	11148.75	3.38
5488	5479.93	0.31	11139	11148.73	3.31
5583	5574.93	0.31	11240	11109.72	3.31
2202	3374.33	0.44	11240	11223.02	5.51

### Acid Pickling and H2S Procedures (If Required)

### \*\*PROCEDURE FOR PUMPING ACID DOWN TBG

WHEN FINDING SCALE IN TUBING THAT IS ACID SOLUBLE, ENSURE THAT PLUNGER EQUIPMENT IS REMOVED AND ABLE TO PUMP DOWN TBG. INSTALL A 'T' IN PUMP LINE W/2" VALVE THAT NALCO CAN TIE INTO. HAVE 60 BBLS 2% KCL MIXED W/ 10-15 GAL H2S SCAVENGER IN RIG FLAT TANK. (WE USED THE RIG FLAT TANK FOR MIXING CHEMICAL SO WE DIDN'T HAVE THE CHEMICAL IN ALL FLUIDS ON LOCATION, ONLY WHAT WE NEEDED TO PUMP DOWN HOLE)

- 1. PUMP 5-10 BBLS 2% KCL DOWN TBG (NALCO CANNOT PUMP AGAINST PRESSURE)
- 2. NALCO WILL PUMP 3 DRUMS HCL (31%) INTO PUMP LINE.
- 3. FLUSH BEHIND ACID WITH 10-15 BBL 2% KCL
- 4. PUMP 2—30 BBL 2% W/ H2S SCAVENGER DOWN TBG.
- 5. PUMP REMAINDER OF 2% W/ H2S SCAVENGER DOWN CASING AND SHUT WELL IN FOR MINIMUM OF 2 HRS.
- 6. OVER DISPLACE DOWN TBG AND CSG TO FLUSH ACID AND SCAVENGER INTO FORMATION
- 7. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

### \*\* PROCEDURE FOR PUMPING H2S SCAVENGER WITHOUT ACID

PRIOR TO RIG MOVING ON OR AS RIG PULLS ONTO LOCATION. TEST CASING, TUBING AND SEPARATOR FOR H2S. IF FOUND MAKE SURE THAT PLUNGER SYSTEM IS REMOVED (IT IS POSSIBLE TO PUMP AROUND PLUNGERS BUT SOME WILL HAVE A STANDING VALVE IN SEATING NIPPLE).

- 1. MIX 10-15 GAL H2S SCAVENGER WITH 60-100 BBL 2% KCL IN RIG FLAT TANK.
- 2. PUMP 25 BBLS MIXTURE DOWN TUBING AND REST DOWN CASING. SHUT WELL IN FOR 2 HOURS.
- 3. IF WELL HAS PRESSURE AFTER 2 HOURS RETEST CASING AND TUBING FOR H2S.
- 4. FLUSH TUBING AND CASING PUSHING H2S SCAVENGER INTO FORMATION.
- 5. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

<sup>\*\*</sup> As per APC standard operating procedure, APC foreman will verify ALL volumes pumped and record on APC Volume Report Form

Form 3160-4 (August 2007)			DEPAR BUREAU	TMEN	T OF		INT									C	MB No. 1	PROVED 1004-0137 Iy 31, 2010
	WELL C	OMPL	ETION O	RRE	COI	MPLI	ETIC	N R	EPOF	RT.	AND L	.OG				ease Seria TU0576		
1a. Type of	_	Oil Well	_			•									6. If	Indian, A	Allottee o	or Tribe Name
b. Type of	Completion	_	lew Well er <b>REC</b> !				□ De	eepen		Plug	Back		iff. R	esvr.		nit or CA ITU6304		nent Name and No.
2. Name of KERR-N	Operator MCGEE OIL	. AND G	AS ONSHŒ	RMEail: J	lennif				ER TH						8. Lo	ease Nam IBU 921	e and W -21A3D	'ell No. S
3. Address	P.O. BOX DENVER,	173779 CO 802	<u> </u>						Phone 720-		. (include -6808	e area o	code)		9. A	PI Well l	No.	43-047-50611
4. Location	of Well (Rep	ort locati		d in acc	ordar	ice wit	ı Fede	eral req	quireme	ents)	*					ield and		Exploratory FS
At surfac			L 815FEL 40					0214 \	W Lon						11. 8	Sec., T., I	R., M., 01	r Block and Survey F9S R21E Mer SLB
At top pr	rod interval ro Sec														12. 0	County o		13. State
At total of 14. Date Sp			15 Ds	ite T.D.	Reac	hed			16 Г	Date	Complet	ed				JINTAH Elevation	s (DF. K	B, RT, GL)*
11/18/2				13/201		nou				) & <i>I</i>	A <b>⊠</b> /2015	Ready	to P	rod.			855 KB	
18. Total D	epth:	MD TVD	11240 11230		19.	Plug B	ack T	.D.:	MD TVI		10	242		20. Dej	oth Bri	dge Plug	Set:	MD 10248 TVD
21. Type El N/A	ectric & Othe	er Mecha	nical Logs Rı	ın (Sub	mit co	opy of	each)					7	Was I	vell core OST run? tional Su	•	No No No No	ΠYe	es (Submit analysis) es (Submit analysis) es (Submit analysis)
23. Casing an	d Liner Reco	rd (Repo	rt all strings	set in w	ell)									1				
Hole Size	Size/Gr	ade	Wt. (#/ft.)	To (MI	^	Bot (M		_	Cemer Depth	nter		of Sks. of Cem		Slurry (BE		Cemer	ıt Top*	Amount Pulled
-										$\dashv$								
•																		
								<u> </u>		-				-		<u> </u>		
24. Tubing	Record							I						1		L		
Size	Depth Set (M	(D) P	acker Depth	(MD)	Si	ze	Dept	h Set (	MD)	Pa	acker De	pth (M	D)	Size	De	epth Set (	MD)	Packer Depth (MD)
2.375 25. Producir		)144			<u> </u>		26	Perfor	ration R	Reco:	rd							
	rmation		Тор	Т	Bo	ttom	+20.				nterval		Т	Size	1	No. Hole	s T	Perf. Status
A)	MESAVE	RDE		0162		1021	3				0162 TC	0 1021	6	0.4			24 OPE	
B)							↓_						4				_	
<u>C)</u>							+						+				_	
D) 27, Acid, Fr	acture, Treati	ment, Cer	ment Squeeze	Etc.														
	Depth Interva									An	nount an	d Type	of M	laterial				
	1016	2 TO 10	216 PUMP 4	401 BB	LS SL	.ICKW/	ATER,	6 BBL	S HCL	ACIE	(12.5%	-18%),	20,46	64 LBS 30	0/50 MI	ESH SAN	D	
	ion - Interval																	
Date First Produced 10/09/2015	Test Date 10/10/2015	Hours Tested 24	Test Production	Oil BBL 0.0	1	Gas MCF 209.	1	Water BBL 446	C	Oil Gra Corr. A			Gas Gravity	7	Product	ion Method Fl	OWS FR	ROM WELL
Choke Size	Tbg. Press.	Csg. Press.	24 Hr. Rate	Oil BBL		Gas MCF	_	Water BBL	C	Gas:Oi	iI		Well S	tatus	L			
64/64	SI 44	1012.0	I ~	0		209		446					F	PGW				
	tion - Interva														12 :			
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL		Gas MCF		Water BBL		Oil Gra Corr. A			Gas Gravit	у	Produc	tion Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL		Gas MCF		Water BBL		Gas:O: Ratio	il		Well S	tatus				

<sup>(</sup>See Instructions and spaces for additional data on reverse side)
ELECTRONIC SUBMISSION #322359 VERIFIED BY THE BLM WELL INFORMATION SYSTEM
\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

200.110	duction - Inter	val C									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	,	Production Method	
hoke ize	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well S	tatus		-
28c. Pro	duction - Inter	val D			·			<b>!</b>			
ate First roduced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	/	Production Method	
choke ize	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well S	tatus	- <b>L</b>	
29. Disp SOL	osition of Gas	Sold, used	for fuel, vent	ed, etc.)	l						
0. Sum	mary of Porou	s Zones (In	clude Aquife	rs):					31. Fo	rmation (Log) Markers	
and 1	Formation		Тор	Bottom		Descripti	ions, Contents, etc.			Name	Top Meas. Dep
									BI M. W	REEN RIVER RDS NEST AHOGANY MARKER ASATCH ESAVERDE	1689 1983 2304 4995 8262

33 Cir	cle end	heart	attachments:

- 1. Electrical/Mechanical Logs (1 full set req'd.)
- Geologic Report
- 3. DST Report
- 4. Directional Survey

- 5. Sundry Notice for plugging and cement verification
- 6. Core Analysis
- 7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #322359 Verified by the BLM Well Information System. For KERR-MCGEE OIL AND GAS ONSHORE, sent to the Vernal

Name (please print)	JENNIFER THOMAS	Title REGULATORY SPECIALIST III
Signature	(Flactronic Submission)	Date 11/03/2015

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fradulent statements or representations as to any matter within its jurisdiction.

				Sec		ROCKIES F	EGION ary Report	
Well: NBU 921-2		GREEN		1			Spud date: 1/11	
Project: UTAH-UI				Site: NBU	921-21A PA	D		Rig name no.:
Event: RECOMP					9/25/2015			End date: 10/9/2015
Active datum: RK Level)	(B @4,8	55.00usft (abc	ove Mean Sea	a	UWI: NE/NI	=/0/9/S/21/E/2	1/0/0/26/PM/N/102	.5/E/0/815/0/0
Date	St	Time art-End	Duration (hr)	Phase		ub P/U	MD from (usft)	Operation
9/25/2015	7:00	- 16:00	9.00	SUBSPR	35	Р		WO 3593 TB 100 CS 278 FL GC Got Ultra Seal Pad Plunger up w/Well. Ran in w/Down Shear Fish Tool to SN at 10894, latched, pulled Titanium Spring w/Single X-cups and Roll Pin, cups good. Fluid Level is gas cut. Left Spring and Plunger in Sep Bldg for Rig Job. FLUID LEVEL gas cut SEAT NIPPLE DEPTH 10894
9/29/2015		- 12:45 - 13:45	0.75 1.00	SUBSPR (	30 A			SN TYPE Drop Down Menu TD (Max Depth) MIRU.  FCP & FTP = 45#. CNTRL TBNG W/ 30BBLS TMAC. CNTRL CSNG W/ 30BBLS TMAC. NDWH. UN-LAND TBG (NOT STUCK). LAND TBG BACK ON HANGER. FUNCTION TEST BOP. NUBOP. R/U FLOOR & TBG EQUIP. UN-LAND TBG & RMV HANGER. INSTALL WASHINGTON RUBBER. SPOT IN TRAILERS & PIPE WRANGLER.
9/30/2015	13:45 7:00	- 17:00 - 7:15	3.25 0.25	SUBSPR SUBSPR	31   48	Р Р		MIRU SCANNERS. POOH WHILE SCANNING 254JTS 2-3/8" P-110 TBNG. L/D ALL TBNG. SWIFN. SDFN. LOCK RAMS. SAFETY = JSA.
	7:15	- 9:30	2.25	SUBSPR	31			SICP & SITP= 240#. BLOW DOWN WELL TO FLOWBACK TANK. POOH WHILE SCANNING THE REMAINDER OF THE TBNG. TOTAL OF 338JTS 2-3/8" P-110 TBNG. L/D ALL TBNG. SCAN RESULTS AS FOLLOWS:
								Y-BND= 50JTS R-BND= 288JTS. JT# 51 THRU JT#338 ALL RED JTS. INTERNAL PITTING & WALL LOSS. NO SCALE THRU ENTIRE STRING EXT OR INT. MOST R-BND 30% TO 50%.
								RDMO SCANNERS.R/D FLOOR & TBNG EQUIP. NUFV.
	9:30	- 10:30	1.00	SUBSPR	34	l P		MIRU WIRELINE. RIH W/ 3.60" GR-JB TO 10,300'. POOH & L/D GR-JB. P/U & RIH W/ 4-1/2" OWEN 10K CIBP. SET CIBP @ 10,246'. POOH E-LINE. RDMO E-LINE.
		- 11:30	1.00	SUBSPR		P P		LOAD CSNG W/ 120BBLS TMAC. PRESSURE TEST 4-1/2" CSNG & FRAC VALVE GOOD @ 3000#. NO VISIBLE PRESSURE LOSS IN 15 MIN. BLEED OFF PRESSURE.
	11:30	- 12:30	1.00	SUBSPR		D P		RDMO. SWI.
	12:30	- 13:30	1.00	SUBSPR	34	l P		R/U WIRELINE. P/U & RIH W/ HAL 10K CBP. GET ON DEPTH. PRESSURE UP CSNG TO 3000#, SET CBP @ 10,242' UNDER 3K SURFACE PRESSURE (SECONDARY PLUG). BLEED OFF PRESSURE. RDMO WIRELINE.

10/28/2015 9:08:01AM

							KIES RE Summa	EGION ry Report	
Nell: NBU 921-2	1A3DS (	GREEN						Spud date: 1/1	1/2012
Project: UTAH-U	INTAH			Site: NBU	921-21	A PAD			Rig name no.:
Event: RECOMP	L/RESEI	REVEADD		Start date	: 9/25/20	)15			End date: 10/9/2015
Active datum: Rh _evel)	KB @4,8	55.00usft (ab	ove Mean S	ea	UWI: N	E/NE/0/9/	S/21/E/21	/0/0/26/PM/N/10	)25/E/0/815/0/0
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	13:30	- 14:20	0.83	SUBSPR	52	Α	P		MIRU TEST TRUCK. PRESSURE TEST CSNG GOOD @ 7000#. LOST 33PSI IN 15MIN. BLEED OFF PRESSURE. SWI.
									PUMP 1/4BBLS TMAC INTO SURFACE CSNG. P/T SURFACE CSNG @ 1000#. LOST 5# IN 10MIN. BLEED OFF PRESSURE.
10/1/2015	9:00	- 10:00	1.00	FRAC	37	Е	Р		RU ELPERFED 1ST STG AS DESIGNED POOH SWIFW
10/6/2015	7:00	- 15:00	8.00	FRAC	36	E	P		HSM, MIRU FRAC CREW, P/T PUMPS & LINES TO 8000 PSI, HAVING TROUBLE GETTING P/T, GOING TO LET FRAC CREW REBIULD PUMPS & GET P/T, FRAC IN AM, SDFN
10/7/2015	5:45	- 6:00	0.25	FRAC	48		Р		HSM, SLIPS, TRIPS & FALLS, RUSHING
	6:00	- 8:30	2.50	FRAC	36	E	P		P/T TO 8000 PSI, LOST 399 PSI IN 15 MIN,
	8:30	- 10:00	1.50	FRAC	46	E	Z		FRAC BLUE & YELLOW WELLS PUMP REPAIRS
	10:00		0.00	FRAC	36	E	P		FRAC STG #1) WHP 1880 PSI, BRK 5055 PSI @ 3.1 BPM. ISIP 3561 PSI, FG. 0.78 ISIP 3801 PSI, FG. 0.81, NPI 240 PSI.
									X/O TO W/L SET HAL 8K CBP AS PER DESIGN
									WATER: 4407 BBLS SAND: 20464 # SCALE: 85 GAL BIO: 52 GAL
				alateraphy in 1996					RDMO
10/8/2015	6:45	- 7:00	0.25	DRLOUT	48		Р		HSM.
	7:00	- 9:30	2.50	DRLOUT	30	A	P		MIRU RIG & SPOT EQUIP.  OPEN WELL 0 PSI. ND WH, NU BOP.  RU RIG FLOOR & TBG EQUIP.
	9:30	- 11:00	1.50	DRLOUT	31	1	P		PREP & TALLY USED YELLOW BAND P-110 TBG. PU 37/8 BIT, X-DART, PUMP OPEN BS & 1.875 XN. RIH W/ 80 JTS.
		- 13:30 - 18:30	2.50 5.00	DRLOUT DRLOUT	48 31	1	P P		CREW T/ 1,000,000 MAN HOUR LUNCH.  CONT RIH W/ TBG OFF TBG FLOAT  TAG SAND W/ 317 JTS TBG @ 10,096'.  RU DRL EQUIP. FILL TBG. SWIFN.  NOTE - READY T/ DRL OUT CBP IN THE :AM.

10/28/2015 9:08:01AM

					l	US ROC	KIES RI	EGION	
					Oper	ation S	Summa	ry Report	
Well: NBU 921-2	21A3DS G	REEN						Spud date: 1/1	11/2012
Project: UTAH-U	IINTAH			Site: NBL	J 921-21	1A PAD	-way		Rig name no.:
Event: RECOMP	PL/RESEF	REVEADD		Start date	e: 9/25/2	2015			End date: 10/9/2015
Active datum: Rh _evel)	KB @4,85	55.00usft (a	bove Mean S	ea	UWI: 1	NE/NE/0/9	/S/21/E/21	/0/0/26/PM/N/10	)25/E/0/815/0/0
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	7:00	- 12:00	5.00	DRLOUT		В	P P		OPEN WELL 0 PSI.  P.T. BOP T/ 3000 PSI. GOOD TEST. BLEED OFF PSI.  BRK CONV CIRC. BEG DRL OUT.  1st CBP) TAG SAND @ 10,096' = 20'. DRL OUT  SAND @ CBP @ 10,116' IN 8 MIN. 1700 PSI INCR.  CONT RIH CO T/ 10,231'. CIRC WELL CLEAN. POOH  LD 3 JTS TBG. PU 41/16 TBG HNGR.  LAND TBG W/ 319 JTS 23/8 YELLOW BAND P-110  TBG W/ 1.875 XN & PUMP OPEN BIT SUB.  RD DRL TBG EQUIP & RIG FLOOR.  ND BOP. NU WH./ DROP BALL.  RIG PUMP T/ TBG. P/T FLOW BACK LINES T/ 3000  PSI. GOOD TEST. BLEED OFF PSI.  PUMP BIT OPEN W/ 3200 PSI. OPEN WELL T/ FBT.  TURN WELL OVER T/ FBC. SICP = 2100 PSI. FTP ON  64/64 CHOKE 250 PSI  RD RIG. SLIDE T/ 21A3AS.
10/12/2015	8:00	- 8:15	0.25	DRLOUT	48		P		HSM
10/13/2015	8:15 7:45	- 12:00 - 8:00	3.75 0.25	DRLOUT	48	<b>A</b>	P		MIRU WEATHERFORD FU W/ N2. UNLOAD WELL PUMP DOWN TBG & RETURN UP CSG. UNLOAD 100 BBLS WATER. SHUT DOWN PUMPING. PURGE CSG & TBG FOR 30 MIN. TURN T/ SALES. HSM.
	8:00	- 10:00	2.00	DRLOUT	33	A	P		RU T/ TBG W FOAM UNIT W/ N2. UNLOAD WELL 1 hr 20 min. RECOVERD 60 BBLS.
10/14/2015	7:45	- 8:00	0.25	RDMO	48		Р		HSM
	8:00	- 10:00	2.00	RDMO	33	A	P		FTP = 50 PSI SICP = 1800 PSI. BLOW CSG DOWN T/ FBT. RU FU/ N2 T/ CSG. BLOW WELL AROUND, 2hr's T/ GET RETURNS. RECOVERD 25 - 30 BBLS. SHUT DOWN PUMPING. SHUT IN CSG. OPEN TBG T/ FBT, LET TBG FLOW ON OPEN CHOKE.
10/15/2015	7:00	- 14:00	7.00	PROD	42		Р		SWABBING FL 200

10/28/2015 9:08:01AM

## 1 General

**Customer Information** 1.7

	Company US ROCKIES REGION	Representative	Address	ative	JS ROCKIES REGION
--	---------------------------	----------------	---------	-------	-------------------

Well/Wellbore Information 1.2

Well	NBU 921-21A3DS GREEN	Wellbore No.	00
Well Name	NBU 921-21A3DS	Wellbore Name	NBU 921-21A3DS
Report no.		Report date	9/25/2015
Project	UTAH-UINTAH	Site	NBU 921-21A PAD
Rig Name/No.		Event	RECOMPL/RESEREVEADD
Start date	9/25/2015	End date	10/9/2015
Spud date	1/11/2012	Active datum	RKB @4,855.00usft (above Mean Sea Level)
UWI	NE/NE/0/9/S/21/E/21/0/0/26/PM/N/1025/E/0/815/0/0		

General <del>.</del>.

Contractor	Job method			Supervisor	
Perforated Assembly	Conveyed method				
Initial Conditions		1.5	Summary		

Initial Conditions

4.

Fluid type		Fluid density		Gross Interval	10,162.0 (usft)-10,216.0 (u Start Date/Time	Start Date/Time	9/25/2015 12:00AM
Surface press.		Estimate res press		No. of intervals	4	4 End Date/Time	9/25/2015 12:00AM
TVD fluid top		Fluid head		Total shots	24	24 Net perforation interval	8.00 (usft)
Hydrostatic press.		Press. difference	4	Avg. shot density	3.00 (shot/ft)	3.00 (shot/ft) Final surface pressure	
Balance Cond NEUTRAL	NEUTRAL					Final press. date	

Intervals

Perforated Interval

Misrun How Guns Conveyed		OpenWells
Charge Reason weight (gram)	19.00 PRODUCTION	
Carr Phasing Charge desc. size (°) /Charge (in) manufacturer	3.125 120.00	
Diameter Carr type /Stage No Carr (in) size (in)	0.410 EXP/1 3.12	
	.0 3.00	
Date Formation/ CCL@ CCL-TS MD MD Shot Misfires/ Reservoir (usft) (usft) (usft) (shotft) Shot	10,162.0 10,164.0	
Date Formation/ CCL@	9/25/2015 MESAVE	October 28, 2015 at 9:09 am

Nov RECEIVED:

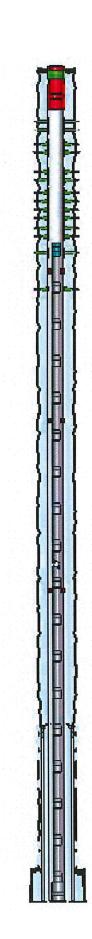
# Perforated Interval (Continued)

2.1

Date Formati	ion/ CCL@	CCL-TS	MD	MD	Shot Misfires/	Misfires/	Diameter	Carr type /Stage No		Phasing	Charge desc.	Charge	Reason	Misrun	How Guns
Resen	Reservoir (usft) (usft)	(nstt)	top	base	density	Add.	(in)		size	(£)	/Charge	weight			Conveyed
			(nsft)	(nsft)	(shot/ft)	Shot			(in)		manufacturer	(gram)			
1/25/2015 MESAVE	'VE		10,180.0	10,182.0	10,180.010,182.0 3.00		0.410 EXP/1	1/c	3.125	120.00		19.00 Pł	19.00 PRODUCTION		
2:00AM RDE/								AND THE PARTY AND AND THE PARTY OF THE PARTY	and the control of th	And and settlement over the control of the control over t	tery tear i speriment meen meer east vaar meer east vaar tear steen teas tear sperimense, vaar een vaar tuur t		The second secon	The state of the s	The state of the s
3/25/2015 MESAVE	\VE		10,194.0	0,194.0 10,196.0	3.00	******	0.410 EXP/1	1/c	3.125	120.00		19.00 Pł	19.00 PRODUCTION		
2:00AM RDE/															
9/25/2015 MESAVE	'VE		10,214.0	0,214.0 10,216.0	3.00		0.410 EXP/1	1/c	3.125	120.00		19.00 Pł	19.00 PRODUCTION	ye (al- 10 m - 1	
12:00AM RDE/					****					•					

**Plots** 

Wellbore Schematic 3.1



RECEIVED: Nov. 03, 2015

OpenWells

	STATE OF UTAH			FORM 9
[	DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS, AND M		i	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0576
SUNDR	RY NOTICES AND REPORTS	S ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
	oposals to drill new wells, significantl reenter plugged wells, or to drill horiz n for such proposals.			7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well				8. WELL NAME and NUMBER: NBU 921-21A3DS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.			<b>9. API NUMBER:</b> 43047506110000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 802		<b>NE NUMBER:</b> 9 720 929-6	9. FIELD and POOL or WILDCAT: 5NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1025 FNL 0815 FEL				COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 21 Township: 09.0S Range: 21.0E Mei	ridian: (	S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDIC.	ATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NAME
Approximate date from this class.	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	□ F	RACTURE TREAT	NEW CONSTRUCTION
12/2/2015	OPERATOR CHANGE	☐ F	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	✓ PRODUCTION START OR RESUME	F	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR		ENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF		SI TA STATUS EXTENSION	APD EXTENSION
Report Bate.			TA OTATOO EXTENSION	
	WILDCAT WELL DETERMINATION		DIHER	OTHER:
The NBU 921-21A	completed operations. Clearly shows 3DS well was returned to publications and recomplete. That	produ	oction on 12/2/2015	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY December 08, 2015
NAME (PLEASE PRINT)	PHONE NUM	/BER	TITLE	
Jennifer Thomas	720 929-6808		Regulatory Specialist	
SIGNATURE N/A			<b>DATE</b> 12/4/2015	

Form 3160-4 (August 2007)			DEPAR BUREA	TMEN		HE IN							OM	B No. 10	PROVED 004-0137 y 31, 2010
	WELL (	COMPL	ETION C	R RE	COMF	PLETI	ON RI	EPOR	T AND I	_OG			ease Serial l	No.	
1a. Type of	Well	Oil Well	<b>⊠</b> Gas '	Well	☐ Dry		Other							ottee or	r Tribe Name
b. Type of	f Completion	Othe	lew Well er	☐ Wor	k Over	I	Deepen	☐ Pl	lug Back	☐ Dif	f. Resvr.		nit or CA A		ent Name and No.
2. Name of	Operator MCGEE OIL	AND G		DNFail∙la	Co	ntact: C	JENNIFE	ER THO	DMAS				ease Name		
	P.O. BOX	173779		TRILLETT. OC	JIII III CI .	THOMA	3a.	Phone	No. (includ	e area co	ode)		PI Well No		
4. Location	DENVER, of Well (Re			nd in acco	ordance	with Fe			)29-6808 nts)*			10. 1	Field and Po	ool, or I	43-047-50611 Exploratory
At surfa	Sec 21	T9S R2	1E Mer SLE L 815FEL 4	3				•	,				NATURAL I	BUTTE	ESÎ Î
	rod interval r		Sec	21 T9S											Block and Survey 9S R21E Mer SLB
At total	Sec		R21E Mer										County or P JINTAH	arish	13. State UT
14. Date Sp 11/18/2	oudded			ate T.D. 1 /13/2012		I			ate Complet & A 🛛 /02/2015	ed Ready t	o Prod.		Elevations (	DF, KE 55 KB	3, RT, GL)*
18. Total D	epth:	MD TVD	11240 11230		19. Plu	g Back	T.D.:	MD TVD	-	788	20. De	pth Bri	dge Plug Se		MD 9786 TVD
21. Type E	lectric & Oth				nit copy	of each	1)			l w	as well core as DST run rectional St	?	<b>⊠</b> No	☐ Yes ☐ Yes	s (Submit analysis) s (Submit analysis) s (Submit analysis)
23. Casing ar	nd Liner Reco	ord (Repo	ort all strings	set in we	ell)										
Hole Size	Size/G	rade	Wt. (#/ft.)	Top (MD		Bottom (MD)	1 -	Cement Depth		of Sks. & of Cemen		y Vol. BL)	Cement	Гор*	Amount Pulled
									+						
					_										
					_										
24. Tubing	Record				<u> </u>		_ I		•				1		
	Depth Set (M		acker Depth	(MD)	Size	De	oth Set (1	MD)	Packer De	pth (MD	) Size	De	epth Set (M	D)	Packer Depth (MD)
2.375 25. Producii		9533				1 2	6. Perfor	ation Re	ecord						
	ormation		Тор		Bottor	_			ed Interval		Size	1	No. Holes		Perf. Status
A)	MESAVE	RDE		8262		240		CIIOIM		O 9756		110		OPE	
В)															
<u>C)</u>															
D)	acture, Treat	ment Cer	nant Saugaza	Etc											
	Depth Interva		nent Squeeze	, Ltc.					Amount an	d Type o	f Material				
	•	50 TO 9	756 PUMP 1	6960 BB	LS SLIC	KWATE	R, 12 BE		HCL ACID,			ESH S	AND		
20 Decducti	ion - Interval	Δ.													
Date First	Test	Hours	Test	Oil	Gas		Water	Oil	Gravity	Ga	s	Product	ion Method		
Produced 12/02/2015	Date 12/21/2015	Tested 24	Production	BBL 0.0	MCI	58.0	BBL 80.0	Co	rr. API		avity			VS FRO	OM WELL
Choke Size	Tbg. Press.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCI	7	Water BBL	Ga: Rai	s:Oil tio	W	ell Status				
24/64	SI Interve	776.0		0		858	80				PGW				
Date First	tion - Interva	Hours	Test	Oil	Gas		Water	loit	Gravity	Ga	s	Product	ion Method		
Produced	Date	Tested	Production	BBL	MCI	7	BBL		rr. API		avity				
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCI	7	Water BBL	Ga: Rai	s:Oil tio	W	ell Status				

<sup>(</sup>See Instructions and spaces for additional data on reverse side)
ELECTRONIC SUBMISSION #327500 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

28b. Prod	luction - Inter	val C									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Grav	ity	Production Method	
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well	Status		
28c. Proc	duction - Inter	ual D		L							
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Grav	ity	Production Method	
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well	Status		
29. Dispo	osition of Gas	Sold, used	for fuel, vent	ed, etc.)				<u> </u>			
	nary of Porou	s Zones (In	clude Aquife	rs):					31. Fo	ormation (Log) Markers	
Show tests,	all important	zones of p	orosity and c	ontents the			l all drill-stem d shut-in pressu	res			
	Formation		Тор	Bottor	n	Descripti	ons, Contents, e	tc.		Name	Top Meas. Dept
32. Addin Recc perfo	tional remarks omplete. A co orations from	s (include p omposite s 10,162 ft.	lugging procesolid plug wato 10, 216 f	edure): as set at 9 t. Thank y	1,786 ft., is	olating the M	<b>1</b> esaverde		BI M W	REEN RIVER IRDS NEST AHOGANY MARKER 'ASATCH ESAVERDE	1689 1983 2304 4995 8262
1. El 5. Su	e enclosed atta ectrical/Mech andry Notice f	anical Logaring	g and cement	verificatio		Geologie     Core Anomplete and co	alysis	7	. DST R Other:	eport 4. Direct	ctional Survey
			Electi	ronic Subi For KERI	mission #32 R-MCGEE	27500 Verifie E OIL AND G	d by the BLM AS ONSHORI	Well Inforn E, sent to tl	nation S he Verna	ystem. al	
Name	e(please print	) JENNIFI	ER THOMAS	S			Title	REGULAT	ORY SE	PECIALIST III	
Signa	nture	(Electror	nic Submissi	on)			Date	12/30/201	5		

					U	S ROCI	KIES R	EGION	
					Opera	ition S	umma	ary Report	
Well: NBU 921-2	1A3DS (	GREEN						Spud date: 1/11	1/2012
Project: UTAH-U	INTAH			Site: NBU	921-21A	PAD			Rig name no.:
Event: RECOMF	L/RESE	REVEADD		Start date	: 11/6/20	15			End date: 12/2/2015
Active datum: RI Level)	KB @4,8	55.00usft (ab	ove Mean Se	ea	UWI: NE	E/NE/0/9/	S/21/E/2	1/0/0/26/PM/N/102	25/E/0/815/0/0
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
11/3/2015	7:00	- 7:15	0.25	SUBSPR	48		Р		HSM-JSA
	7:15	- 17:30	10.25	SUBSPR	31	I	Р		RDMO 921-A3AS, MIRU, CNTRL WELL W/ 20 BBLS TMAC, NDWH, NUBOP, PU 3 JTS TBG TAF FILL @ 10221' LD 3 JTS TBG, SPOT TBG TRLR POOH LD 319 JTS 2 3/8" P-110 TBG, SWI, SDFN.
11/4/2015	7:00	- 7:15	0.25	SUBSPR	48		Р		HSM-JSA
	7:15	- 11:00	3.75	SUBSPR	30	С	Р		SICP 375 PSI, CNTRL WELL W/ 20 BBLS TMAC, NDBOP, NUFV, RDMO, MOVE RIG & EQUIP TO CIGE 86D
	11:00	- 11:00	0.00	SUBSPR	34	I	Р		MIRU CUTTERS RIH W/ HAL 10K CBP, STICK PLUG @ 8550', SWI,SDFN.
11/5/2015	9:00	- 19:30	10.50	SUBSPR	34	I	Р		RU CUTTERS BRAIDED LINE TRK RIH W/ CHISEL TAG PLUG @ 8550' WORK PLUG FOR 5 HRS BRK RIH TO 10200', POOH RD BRAIDED LINE, RU WIRELINE, RIH W/ 3.66" GR TO 9800', POOH PU HAL 8K CBP RIH SET CBP @ 9786', POOH, FILL CSG W/ WTR, MIRU CAMERON TEST TRK, TEST CSG & FRAC VALVES TO 7000 PSI, LOST 39 PSI IN 15 MIN, PU GUN RIH PERF STG #2 AS DESIGNED, SWI, SDFN.
11/23/2015	6:00	- 14:45	8.75	FRAC	36	Н	Р		HSM, PRESSURD TESTED LINES. TO 8555 PSI, LOST 830 PSI IN 15 MIN.  FRAC STAGE 1)WHP 1921 PSI, BRK 4550 PSI @ 2.6 BPM. ISIP 3914 PSI, FG. 0.74 ISIP 3577 PSI, FG. 0.8, NPI -337 PSI.
		- 15:45	1.00	FRAC	46	Е	Χ		PUMP REPAIRS
		- 0:00	8.25	FRAC	36	Н	Р		SET HAL 8K CBP & PERF STG #2 AS DESIGNED.
11/24/2015	0:00	- 0:00	24.00	FRAC	36	Н	Р		FRAC STG #2) WHP 2550 PSI, BRK 4744 PSI @ 3 BPM. ISIP 3145 PSI, FG. 0.77 ISIP 3331 PSI, FG. 0.79, NPI 186 PSI.  CROSS OVER TO WIRELINE, RIHW CBP.  TOTAL FLUID; 16,972 BBLS TOTAL SAND: 81,177 #
12/1/2015	11:00	- 11:45	0.75	DRLOUT	30	Α	Р		0# ON WELL. MIRU. SPOT IN ALL EQUIP.
		- 12:30	0.75	DRLOUT	30	F	Р		NDWH. NUBOP. FUNCTION TEST BOP. R/U FLOOR & TBG EQUIP.
		- 17:00	4.50	DRLOUT	31	I	Р		SET UP PIPE WRANGLER & PIPE RACKS. PREP & TALLY TBNG. P/U & RIH W/ 3-7/8" BIT, PUMP OPEN BIT SUB, 1.875" XN + 200JTS 2-3/8" P-110 Y-BND TBG. WINTERIZE EQUIP. LOCK RAMS. SWIFN. SDFN.
12/2/2015		- 7:15	0.25	DRLOUT	48		Р		SAFETY = JSA.
		- 9:30	2.25	DRLOUT	31	I	Р		0# ON WELL. CONT RIH W/ 3-7/8" BIT, PUMP OPEN BIT SUB, 1.875" XN + 2-3/8" P-110 TBNG. T/U ON KILL PLUG @9300'. R/U POWER SWIVEL.
	9:30	- 10:15	0.75	DRLOUT	52	F	Р		BREAK CONV CIRC W/ TMAC. P/T CSNG & BOP GOOD @ 3000#. BLEED OFF PRESSURE.

12/17/2015 11:59:55AM 1

						KIES RE		
				Opera	ation S	umma	ry Report	
Vell: NBU 921-	-21A3DS GREEN						Spud date: 1/1	11/2012
Project: UTAH-l	UINTAH		Site: NBL	J 921-21 <i>F</i>	A PAD			Rig name no.:
vent: RECOM	PL/RESEREVEADD		Start date					End date: 12/2/2015
ctive datum: R evel)	RKB @4,855.00usft (ab	ove Mean S	ea	UWI: NI	E/NE/0/9/	S/21/E/21	/0/0/26/PM/N/10	025/E/0/815/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
	10:15 - 13:30	3.25	DRLOUT	44	С	Р		D/O 2 CBP'S AND C/O TO PBTD AS FOLLOWS:
								#1 CBP @9300'. D/O IN 9 MIN W/ 800# DIFF PRESSURE. FCP= 100#. CONT RIH W/ TBNG. C/O 30' SAND. T/U ON NEXT CBP.  #2 CBP @9532'. D/O IN 16 MIN W/ 900# DIFF PRESSURE. FCP= 900#. CONT RIH W/ TBNG. C/O 20' SAND. T/U ON ISOLATION PLUG @ 9786' W/ 308JTS TBNG + BHA. CIRC WELL CLEAN. R/D POWER SWIVEL. POOH WHILE L/D 8JTS TBNG NOT NEEDED FOR PRODUCTION. LUBE IN HANGER. LAND TBNG. R/D FLOOR & TBNG EQUIP. NDBOP. NUWH. PRESSURE TEST FLOWLINES GOOD @ 3000#. PUMP OPEN BIT SUB @ 3200# W/ 10BBLS TMAC. SICP= 2360#. SITP= 1800#. TURN WELL OVER TO FLOWBACK CREW.  PRODUCTION TBNG LANDED AS FOLLOWS: K.B.= 26.00' HANGER= .83' 299JTS 2-3/8" P-110 Y-BND TBNG= 9478.21' 1.875" XN= 1.34' 1JT 2-3/8" P-110 Y-BND TBNG= 31.67' PUMP OPEN SUB=2.20' EOT @9533.32' XN @9498.11'  TOTAL FLUID PUMPED = 16,972BBLS RIG RECOVERED = 1100BBLS
	13:30 - 16:00	2.50	DRLOUT	30	С	Р		TWLTR= 15,872BBLS  R/D RIG. WINTERIZE EQUIP. RACK OUT ALL EQUIP.  PREP FOR RIG MOVE IN THE AM.
	16:00 - 16:00	0.00	DRLOUT	50				WELL TURNED TO SALES @ 15:30 HR ON 12/2/2015, 1.2 MCFD, 720 BWPD, FCP 2212#, FTP

12/17/2015 11:59:55AM 2

RECEIVED: Dec. 30, 2015

2300#, 22/64" CK.

**US ROCKIES REGION** 

### General

# 1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

# 1.2 Well/Wellbore Information

Well	NBU 921-21A3DS GREEN	Wellbore No.	00
Well Name	NBU 921-21A3DS	Wellbore Name	NBU 921-21A3DS
Report no.	_	Report date	11/23/2015
Project	UTAH-UINTAH	Site	NBU 921-21A PAD
Rig Name/No.		Event	RECOMPL'RESEREVEADD
Start date	11/6/2015	End date	12/2/2015
Spud date	1/11/2012	Active datum	RKB @4,855.00usft (above Mean Sea Level)
IMN	NE/NE/0/9/S/21/E/21/0/0/26/PM/N/1025/E/0/815/0/0		

## 1.3 General

Contractor	Job method	Supervisor	
Perforated Assembly	Conveyed method		

Summary

1.5

## 1.4 Initial Conditions

Fluid type		Fluid density	Gross Interval	9,350.0 (usft)-9,756.0 (usft Start Date/Time	Start Date/Time	12/28/2015 12:00AM
Surface press.		Estimate res press	No. of intervals	13	13 End Date/Time	12/28/2015 12:00AM
TVD fluid top		Fluid head	Total shots	48	48 Net perforation interval	16.00 (usft)
Hydrostatic press.		Press. difference	Avg. shot density	3.00 (shot/ft)	3.00 (shot/ft) Final surface pressure	
Balance Cond	NEUTRAL				Final press. date	

## 2 Intervals

## 2.1 Perforated Interval

Misrun How Guns Conveyed	0	OpenWells
Reason	19.00 PRODUCTION	
Charge weight (gram)	19.00	
Charge desc. /Charge		
Carr Phasing size (°)	3.125 120.00	
Carr size (in)	3.125	
Carr type /Stage No	0.410 EXP/2	1
Diameter (in)	0.410	
Misfires/ Add.	5	
Shot density (shot/ft)		
MD Sase d	Ψ.	
MD top (IIsff)	9,350.	
CCL-TS (usft)		
(nsft)		:01 pm
Formation/ CCL@ CCL-TS MD MD Shot Misfres/ Reservoir (usft) (usft) top base density Add.	2/28/201 MESAVE RDE/ 2:00AM	December 17, 2015 at 12:01 pm
Date	12/28/201 5 12:00AM	December

Perforated Interval (Continued)

2.1

Misrun How Guns Conveyed	0	0	0	0	0	0	0	0	0	0	0	0
	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION	19.00 PRODUCTION
Charge weight (gram)	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00
Charge desc. /Charge manufacturer												
Phasing (°)	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00	120.00
Size (in)	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
Diameter Carr type /Stage No (in)	0.410 EXP/2	0.410 EXP/2	0.410 EXP/2	0.410 EXP/2	0.410 EXP/2	0.410 EXP/1	0.410 EXP/1	0.410 EXP/1	0.410 EXP/1	0.410 EXP/1	0.410 EXP/1	0.410 EXP/1
Misfires/ D Add. Shot												
Shot M density (shot/ft)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
MD base (usft)	9,383.0	9,407.0	9,441.0	9,484.0	9,517.0	9,550.0 9,551.0	9,570.0	9,643.0	9,669.0	9,689.0	9,710.0	9,756.0
MD top (usft)	9,382.0 9,383.0	9,406.0 9,407.0	9,440.0	9,482.0	9,515.0 9,517.0	9,550.0	9,569.0	9,642.0	9,668.0 9,669.0	9,688.0 9,689.0	9,709.0 9,710.0	9,754.0
CCL-TS (usft)												
(nsft)												
Formation/ Reservoir	MESAVE RDE/	MESAVE RDE/	MESAVE RDE/	MESAVE RDE/	MESAVE RDE/	MESAVE RDE/	MESAVE RDE/	MESAVE RDE/	M E S A V E RDE/	MESAVE RDE/	MESAVE RDE/	MESAVE RDE/
Date	12/28/201   5 5 12:00AM	12/28/201   5 12:00AM	12/28/201   5 5 12:00AM	12/28/201   5 5 12:00AM	12/28/201   5 5 12:00AM	12/28/201 5 12:00AM	12/28/201   5 5 12:00AM	_	12/28/201   5 5 12:00AM	_		_

Plots

December 17, 2015 at 12:01 pm

OpenWells